



# Grade Six - Remote Learning WK 5/6 2021

**PLEASE READ THIS FIRST!** Name.....

We are back to working Remotely, and I hope it is not too long before we are back at school. We understand it is not the best way to learn, but we are hoping you give it your best effort, as there are some interesting things you can do. Do your best in regards the work you get done. There are more difficult and easier tasks. Set yourselves reasonable goals and expectations, as you would in class. Continue to read, continue your projects, and you have the Mini Project on a Planet you can work on. The Fun Maths Activities are there if you need some more work.

This week we are going to continue to look at our Solar System. You can look at the Solar System website again [solarsytem.nasa.gov](http://solarsytem.nasa.gov), but there are sheets to read in the booklet on the Planets. They are from the booklet we have been reading. We will talk about it on Monday at our ZOOM meeting so make sure you have done the reading between now and then.

In Maths, we are continuing to look at Fractions. I will talk about the work at our ZOOMs, and you may wish to ask questions then, at the end of the meeting, or email me for an extra ZOOM. I have also made some YouTube Clips. You can get links to these on the Doreen PS website in the grade 6 Remote Learning section, or simply search Youtube for the Doreen PS Channel, and go to my clips on Fractions.

I have attached the Aussie Trip project again for those who want to work on it. I will talk about it again at a ZOOM next week.

Here is an idea for your Day. Plan your day, set goals. Start the activities in the packs and aim to get up to a certain level each day. Set a goal to complete a certain amount of activities in each session. Mark it on your sheet, and when you get to the mark, move on to the next activity.

**9.00 am** Literacy - Reading Activity- read the texts that I have set, Word Study, Soundwaves, Newspapers, Storywriting - You are an Olympian

**10.30 am** Have a break, do some Physical Activities.

**11.00am** Numeracy - Maths - the activities are levelled, so they are marked as easier or harder. We have done this before last term and in class at school. Choose the level that you believe you can achieve but still be challenged a little. When you have done this you can challenge yourself by going up a level. Spend some time on Study Ladder.

**12.30 pm** Lunch

**2.00pm** Projects, Aussie Trip Project, Quiet Reading, Mini Project on a Planet.

[Glenn.Simondson@education.vic.gov.au](mailto:Glenn.Simondson@education.vic.gov.au) 0418 366 286

[Janine.Green@education.vic.gov.au](mailto:Janine.Green@education.vic.gov.au)

All of our ZOOM meetings are at 11.00am each day BUT I am happy to run a meeting in the afternoons a well for anyone with questions. Just send me an email or a text. I am at school every day, so I would be very happy to do it!

Mr Simondson's Grade Six Zoom meeting: Meeting ID: 8934031321 Passcode: 97173563

Mrs Green's Grade Six ZOOM Meeting Meeting ID: 299 026 8310 Passcode: 97173563

You can ring or email Mrs Green or I at any time during the day to clarify something.

Here are the Fractions YouTube clips. Type them in, or use the links in the grade6 folder on the website. If you open the copy of this week's workbook online, it will also take you there. Watch them, it will help, or you might just get a laugh. Some clips had nearly 100 views!

Fractions 1 [https://youtu.be/x10Cy2n9b4Y?list=PL4PgdoOoCqR\\_eYoPTkR6Pk0Hs54v0erLgi](https://youtu.be/x10Cy2n9b4Y?list=PL4PgdoOoCqR_eYoPTkR6Pk0Hs54v0erLgi)

Fractions 2 [https://youtu.be/G2eU\\_t6z-E?list=PL4PgdoOoCqR\\_eYoPTkR6Pk0Hs54v0erLgi](https://youtu.be/G2eU_t6z-E?list=PL4PgdoOoCqR_eYoPTkR6Pk0Hs54v0erLgi)

Fractions 3 [https://youtu.be/YG2psh7R3R0?list=PL4PgdoOoCqR\\_eYoPTkR6Pk0Hs54v0erLgi](https://youtu.be/YG2psh7R3R0?list=PL4PgdoOoCqR_eYoPTkR6Pk0Hs54v0erLgi)

**BRING THE BOOKLET BACK TO SCHOOL WHEN WE RETURN OR DROP IT IN THE BOX IF WE GO LONGER THAN ONE WEEK.**



# THE SUN

About 99 per cent of the mass of the solar system is contained within the sun. Even the biggest planet in the solar system, Jupiter, is only one-tenth its diameter.

But from a cosmic perspective, the sun is one of about 400 billion stars in the Milky Way revolving around the dazzling bulge at the core of the galaxy.

Distances are so immense that the sun, speeding along at 210km every second, requires 225 million years to complete one revolution of the distant centre mass of stars.

At its simplest, the sun is a ball of gas, a place of unimaginable heat and fury. Temperatures at its core probably reach 15 million degrees Celsius, the result of constant thermonuclear fusion of hydrogen to form helium. It is the same reaction as in a hydrogen bomb. The energy released deep within the sun is equivalent to that which would be released from the explosion of 100 billion one-megaton hydrogen bombs a second.

Near the polar regions are "rivers" of electrically charged gases that contribute to immense solar flares that reach far into space.

The sun is a magnetically active star with a strong magnetic field that varies year by year and reverses direction about every 11 years.

This magnetic field produces solar activity including sunspots on the surface of the sun, solar flares and variation in solar wind that carries material through the solar system.

At least three spacecraft are observing the sun.

NASA is also doing preliminary work on plans to send a solar probe closer to the sun than ever before, flying through the sun's corona 6.7million kilometres from the sun's core and withstanding radiation and temperatures up to 1400°C.



## SUN FACTS

Mean distance from Earth 149.6 million km.

Distance from centre of Milky Way Galaxy about 26,000 light years.

Main components Hydrogen and helium.

Period of rotation 25.05 days.

Equatorial diameter 1.4 million km.

Relative to Earth 109 times larger.

Average surface temperature 6000°C.

Expected life More than 5 billion years.



# MERCURY

**M**ercury is so close to the sun that it is often difficult to see from

Earth, appearing low to the horizon just before sunrise or after sunset.

But 13 times a century it makes an indirect appearance passing across the face of the sun, an event called a transit. There were transits in May 2003 and November 2006, but the next is not until May 9, 2016.

Being so close also means Mercury has the shortest "year" of all the planets: it speeds around the sun four times every Earth year.

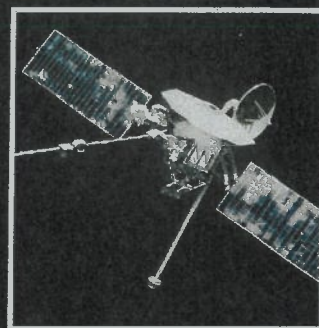
Mercury's rotation, once every 58 days, is two-thirds of the time it takes to orbit the sun, making the period from noon one day to noon the next 176 Earth days.

Unlike the lunar terrain, Mercury's craters are shallow, but there is one vast crater, the Caloris Basin, larger than the distance between Canberra and Brisbane. It was formed when Mercury and another rocky body collided. The impact was so great that there are large rocky ridges on the opposite side of the planet that were created by shockwaves from the collision.

Galileo made the first telescopic observations of Mercury in the early 17th century, and the first spacecraft to visit Mercury was Mariner 10, which mapped about 45 per cent of the planet from 1974 to 1975.

But the current MESSENGER mission is unlocking the planet's secrets. It recently made a second pass of the planet with a third due in late September. In two years it will enter orbit around the planet and spend a year mapping Mercury's surface.

The European Space Agency is planning a joint mission with Japan, to launch in 2013, called BepiColombo to orbit Mercury with two probes - one to map the planet and one to study its magnetosphere.



## SPEED KING

A photo-mosaic of Mercury built by NASA computers from the thousands of pictures taken in 1974-75 by the Mariner 10 spacecraft (above).

## MERCURY FACTS

Diameter at equator  
4878km

Average temperature  
450°C (day), -170°C (night)

Average distance from sun  
58 million kilometres

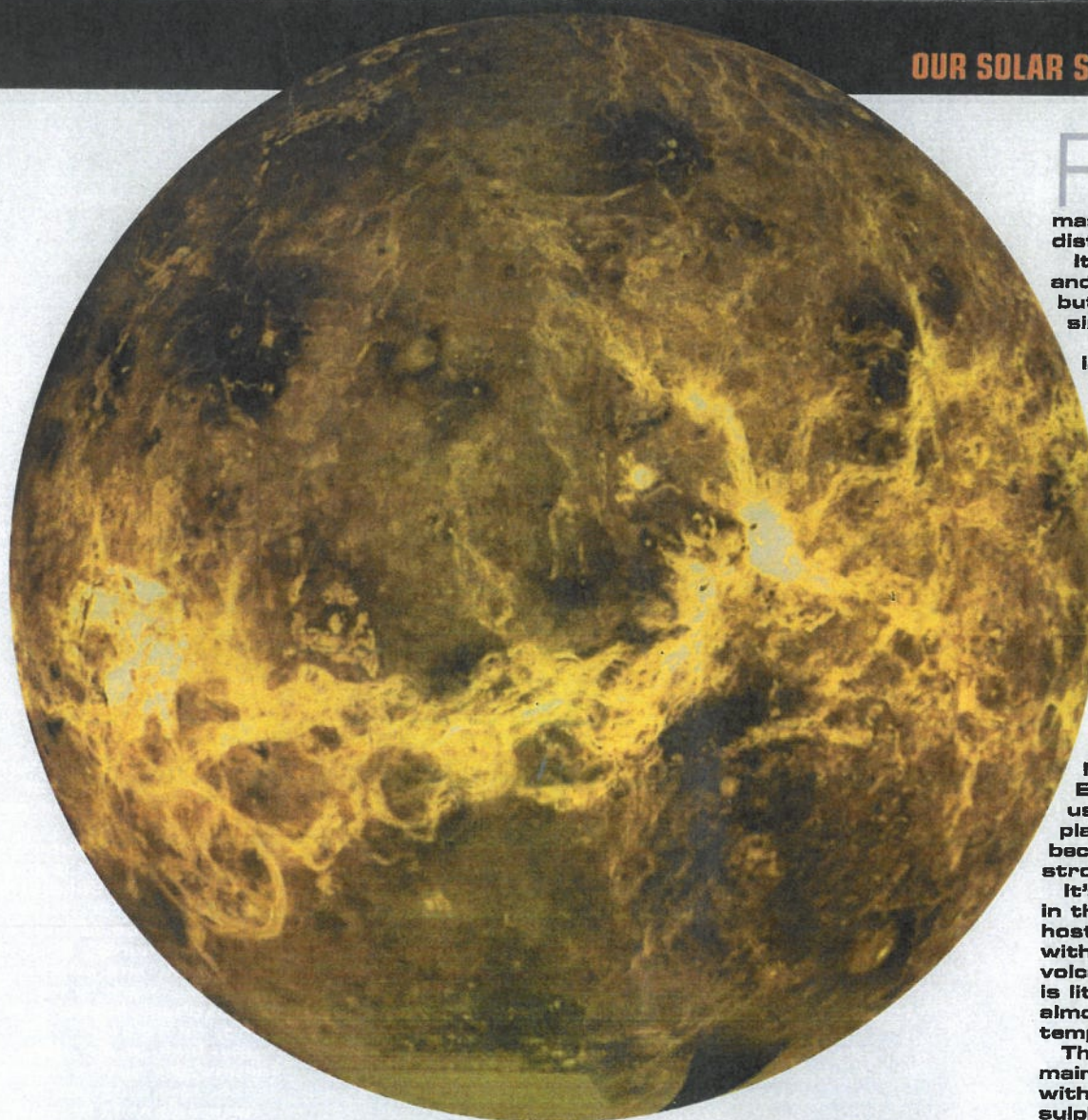
Length of year  
88 Earth days

Period of rotation  
59 days

Minimum travelling time from Earth  
5.5 months

Size of sun as seen from planet  
twice as big as from Earth





# VENUS

## VENUS FACTS

Diameter at equator  
12,103km.

Average temperature  
465°C.

Average distance from  
sun 108 million km.

Length of year 225  
Earth days.

Period of rotation  
243 Earth days  
(retrograde).

Volume of planet  
compared with Earth  
81 per cent.

Minimum travelling time  
from Earth  
three months.

Size of sun as seen from  
planet a third larger  
than as from Earth.



### HIGHLIGHT

A computer generated image built from radar data reveals Maat Mons, at 8000m the tallest volcano on Venus, the hottest planet in the solar system.

For many years Venus was considered a twin of Earth - similar in size, mass, composition and distance from the sun.

It has a rocky surface and is shrouded in cloud, but that is where the similarities end.

Venus has an incredibly harsh environment. If we were to step on its surface we would be instantly fried, crushed and corroded.

There are no oceans and the atmosphere is heavy with carbon dioxide that traps heat to create a scorched world with temperatures hot enough to melt lead.

From Earth, Venus appears in the twilight as the Morning Star or Evening Star. It's usually the brightest planet in the night sky because the thick clouds strongly reflect sunlight.

It's the hottest planet in the solar system - a hostile, blistering world with constantly belching volcanoes where there is little relief from an almost constant 465°C temperature.

The dense toxic air is mainly carbon dioxide with thick clouds of sulphuric acid droplets.

Successive probes from Earth folded under the weight of the atmosphere as they descended through the clouds. Probes that have landed on Venus have not survived more than a few hours.

A murky atmosphere extending almost 400km hides the planet's surface, but various scientific missions have used radar and infrared mapping to image the surface and cloud structures.

The Sun shining through a sky of radiant orange illuminates the surface and more than 1000 volcanoes larger than 20km in diameter in an eerie orange-red light.

As with Mercury, Venus periodically passes across the face of the sun with more than a century separating each pair of transits.

There was a transit on June 8, 2004, with another to occur on June 6, 2012.



# EARTH

Life makes the third planet from the Sun unique.

Earth is probably the strangest planet in the solar system. It's the only known planet to support living beings and is an active world, combining many of the most exciting features found on other planets - volcanoes, erosion, hurricanes and a large moon, though those on Earth tend to be of a more modest scale.

Earth also has unique features - drifting continents, liquid water and living beings.

The three main components of our planet - rocks, water and atmosphere - are visible from space as three dominant colours: reddish-brown, blue and white. Some patches of green, the Earth's vegetation, can also be seen.

Life on Earth depends on heat from the sun - either directly or as reflected from land, ocean and ice surfaces. Our atmosphere is in constant motion, forming complex circulation patterns we know as the weather.

The most dominant feature - one that has earned Earth the description of the Blue Planet - is water, which covers almost three-quarters of the surface. This, too, is in constant motion.

As with many planets, there is a big gap in the high and low temperatures on Earth, though not the extreme range of other planets. The hottest temperature ever recorded was in September 1922 in El Aziziyah, Libya, when it hit 57.8°C. The coldest was at Vostok Station, Antarctica, in July 1983

## EARTH FACTS

Diameter at equator 12,756km.

Average temperature 15°C.

Average distance from sun 149.6 million km.

Length of year 365 days.

Period of rotation 23 hours 56 minutes.

Number of moons one.

when it was -89.2°C.

So large is our moon - a quarter the size of the planet around which it revolves - many astronomers think of the Earth and moon as a double planet.

In stark contrast to Earth, our moon is devoid of life, though billions of tonnes of water ice are thought to be hidden in the permanently shaded craters at the poles. Because there is no atmosphere there is no wind, or sound.

The lack of air also means the sky is always black, the sunlight is extraordinarily bright, solar radiation levels are dangerously high and the temperature swings from one extreme to another - up to 107°C during the two weeks any part of the moon is lit by the Sun and down to -170°C during the two-week "night".



# MARS

In size and appearance, the "Red Planet" is a cross between Earth and the moon.

It has an atmosphere, clouds and polar caps. Its day is also remarkably similar in length to ours.

Apart from Earth, it's also the planet we know the most about.

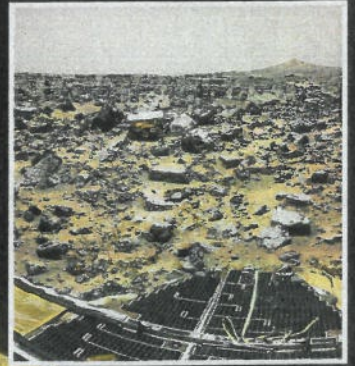
Every day we learn more. Many missions are exploring Mars. The twin NASA rovers Spirit and Opportunity have spent more than five years on the planet's surface sending back images and measurements. Mars Odyssey, Mars Express and Mars Reconnaissance Orbiter are observing from overhead in orbit. Phoenix recently spent five months on the surface, confirming the presence of ice under the surface and potential nutrients and other substances in the soil, and observing snow in the atmosphere.

Despite our push to explore Mars and the possibilities of living there, conditions are particularly unfriendly towards life. Its soil has no carbon, the building block of life. Its thin atmosphere, equivalent on its surface to being 35km above Earth, is devoid of ozone, leaving the planet exposed to the full intensity of the sun's ultraviolet rays.

It's chillingly cold, with temperatures dropping as low as  $-140^{\circ}\text{C}$ . Mars, as with Earth, has seasons, but they last twice as long. Temperatures on a spring morning would be about  $-85^{\circ}\text{C}$ , under a butterscotch-coloured sky etched with icy clouds - some white, others light blue.

Violent wind storms carry vast dust clouds across the planet at more than 200km/h.

These are all factors that scientists and engineers must overcome before we send human explorers to the planet.



**Above**  
**MARS ROVER**  
Man's most remarkable exploration of Mars was from July to September 1997 when the Pathfinder probe bounced on to the surface. Its Sojourner rover beamed back amazing pictures.

## MARS FACTS

**Diameter at equator**  
6794km.

**Average temperature**  
 $-55^{\circ}\text{C}$ .

**Average distance from sun**  
228 million km.

**Length of year**  
687 Earth days.

**Period of rotation**  
24 hours 37 minutes.

**Number of moons** two.

**Volume of planet**  
compared with Earth  
one-seventh.

**Minimum travelling time**  
from Earth  
four to six months.



**J**upiter is the biggest planet in the solar system and has so many satellites and rings that it constitutes a miniature system on its own.

Astronomers have discovered 62 satellites or moons orbiting the giant planet - including four planet-sized moons - with 49 of those officially named.

Jupiter is so large it could accommodate all the other planets in our solar system within it and still have room.

Broad orange and white bands encircle Jupiter. These bands revolve at different speeds and in opposite directions. With winds hurtling around the planet at more than 600km/h.

One of the most recognisable features of Jupiter is its Great Red Spot, a storm south of the equator that is three times the size of Earth.

Jupiter has no real surface. Its atmosphere, 1000km deep, turns progressively more liquid the deeper one descends into it, but with an ever-increasing pressure far beyond what humans could withstand.

A recent fly-past by the Cassini-Huygens spacecraft, on its way to Saturn, revealed a vast, invisible whirling bubble of charged particles or magnetosphere surrounding Jupiter - a finding that will help understand Earth's own magnetosphere that shields us from solar radiation.

## JUPITER FACTS

**Diameter at equator**  
143,000km.

**Average temperature**  
-150°C.

**Average distance from sun** 778 million km.

**Length of year**  
11.9 Earth years.

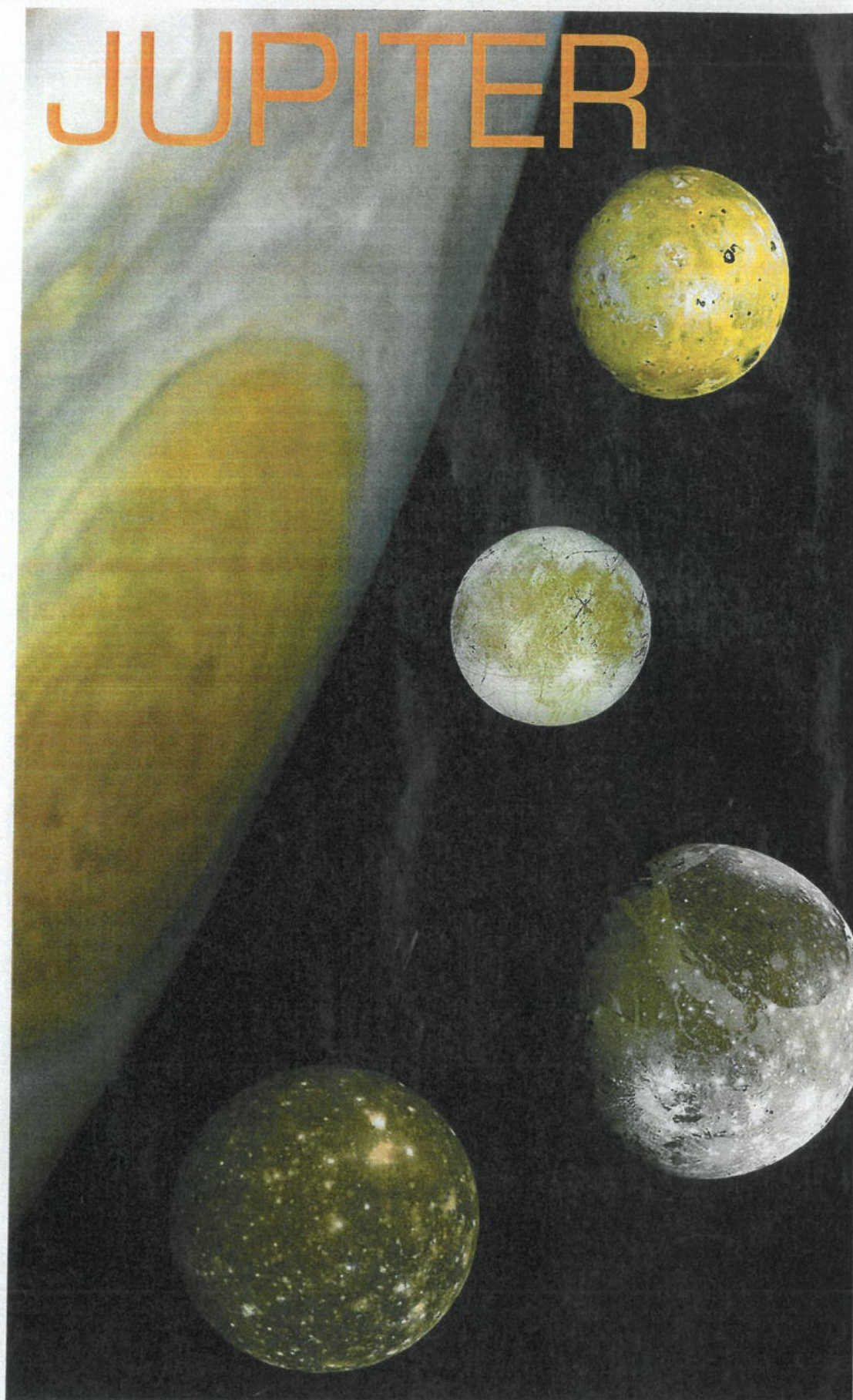
**Period of rotation**  
9 hours 55 minutes.

**Number of moons** 62.

**Volume of planet compared with Earth**  
1316 times as big.

**Minimum travelling time from Earth**  
about 18 months.

# JUPITER





# SATURN



## BRAVE VISITOR

The Cassini spacecraft arrived at Saturn in 2004 and is now observing Titan, Saturn's largest moon.

Saturn is the glittering jewel in the crown of the solar system.

One of the most beautiful worlds, it is a huge globe of spectacular colour, girdled with thousands of multi-hued rings.

The rings begin about 700km above Saturn's clouds and extend 74,000km into space - yet incredibly they average only 100m thick.

The reddish-tan and brown tones are created by billions of chunks of water-ice - some dust specks, others boulders 10m or more in width - embedded with iron-oxide rust and other impurities.

Saturn has more than 60 moons and moonlets ranging from only 500m across to Titan, the second largest moon in the solar system at 5150km.

Saturn, its rings and some of its larger moons are visible through a backyard telescope.

As with Jupiter, this is a world of gas, a planet so light it would float in water like a cork.

In the past five years, 30 moons or satellites have been found orbiting Saturn. The most recent was a tiny moonlet now known as Aegaeon.

The Cassini spacecraft entered orbit around Saturn on June 30, 2004, and immediately began to reveal the planet's secrets and beam back incredible pictures.

Cassini's observations of Titan, Saturn's largest moon, have given us a glimpse of what Earth might have been like before life evolved.

Scientists now believe Titan has many parallels to Earth including lakes, rivers, channels, dunes, rain, snow, clouds, mountains and possibly volcanoes.

Cassini's mission has been extended to become the Cassini Equinox Mission and make 60 extra orbits of Saturn including fly-bys of Titan, and of some of the other larger moons.

## SATURN FACTS

**Diameter at equator**  
120,540km.

**Average temperature**  
-178°C.

**Average distance from sun** 1427 million km.

**Length of year**  
29.4 Earth years.

**Period of rotation**  
10 hours 39 minutes.

**Number of moons** 61.

**Volume of planet**  
compared with Earth  
763 times as big.

**Minimum travelling time**  
from Earth  
about three years.



**F**rom Uranus, the Sun appears little more than a bright star in the distant sky.

Once considered one of the more boring planets to look at, Uranus has been found to be a dynamic world with bright clouds and a series of 11 rings.

Uranus appears to be a blue-green sphere that is essentially featureless apart from a small number of faint white wispy clouds.

The blue-green radiance, called electroglow, comes from the methane gas in the atmosphere. Sunlight is reflected from Uranus's cloud tops, which lie beneath a layer of methane gas. As the reflected sunlight passes through it the methane absorbs the red portion of the light, allowing the blue portion to pass through.

Uranus was the first planet found with the aid of a telescope when it was discovered by astronomer William Herschel in 1781.

Uranus is a gas giant, along with Jupiter, Saturn and Neptune. At least 80 per cent of its mass is contained in an extended liquid core of "icy" materials such as water, methane and ammonia.

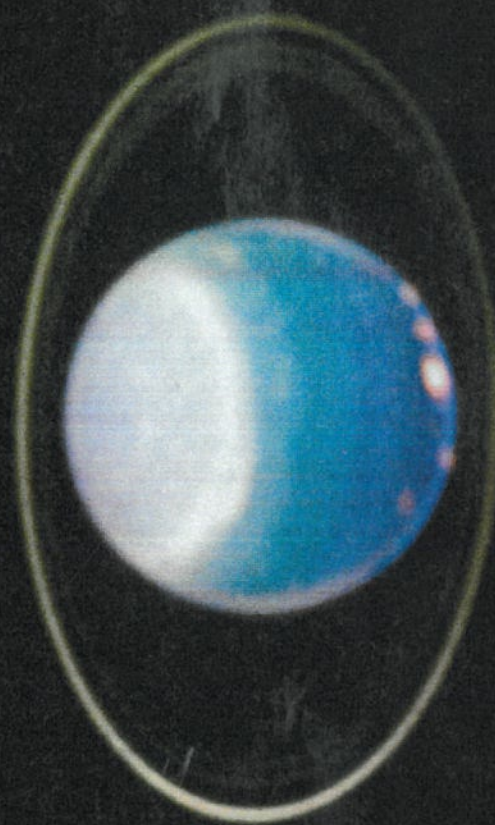
The deeper the descent into its atmosphere, the more liquid the gas becomes - eventually giving way to hot rocks.

The surface is frigid, with an atmosphere whipped up by violent 650km/h winds.

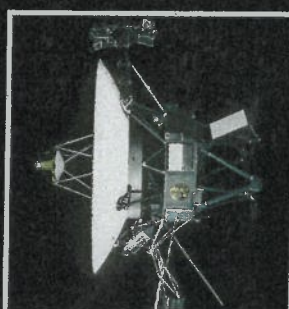
Because it is tipped on its side as it orbits the sun, Uranus has the strangest seasons in the solar system - lasting more than 20 years. Its south pole points to the sun for 21 years, then the planet moves side on before presenting its north pole.

Astronomers continue to discover new moons in orbit around Uranus. The moons have romantic names, thanks to a decision to call the largest after characters from plays by Shakespeare and poems by Alexander Pope - names including Titania, Portia, Juliet, Desdemona, Miranda and Puck.

# URANUS



**MIGHTY UNUSUAL**  
A photo-mosaic of the chaotic surface of the moon Miranda.



**TINY TRAVELLER**  
Voyager 2 photographed Uranus in January 1986.

## URANUS FACTS

Diameter at equator  
51,200km.

Average temperature  
-216°C.

Average distance from  
sun: 2871 million km.

Length of year  
84 Earth years.

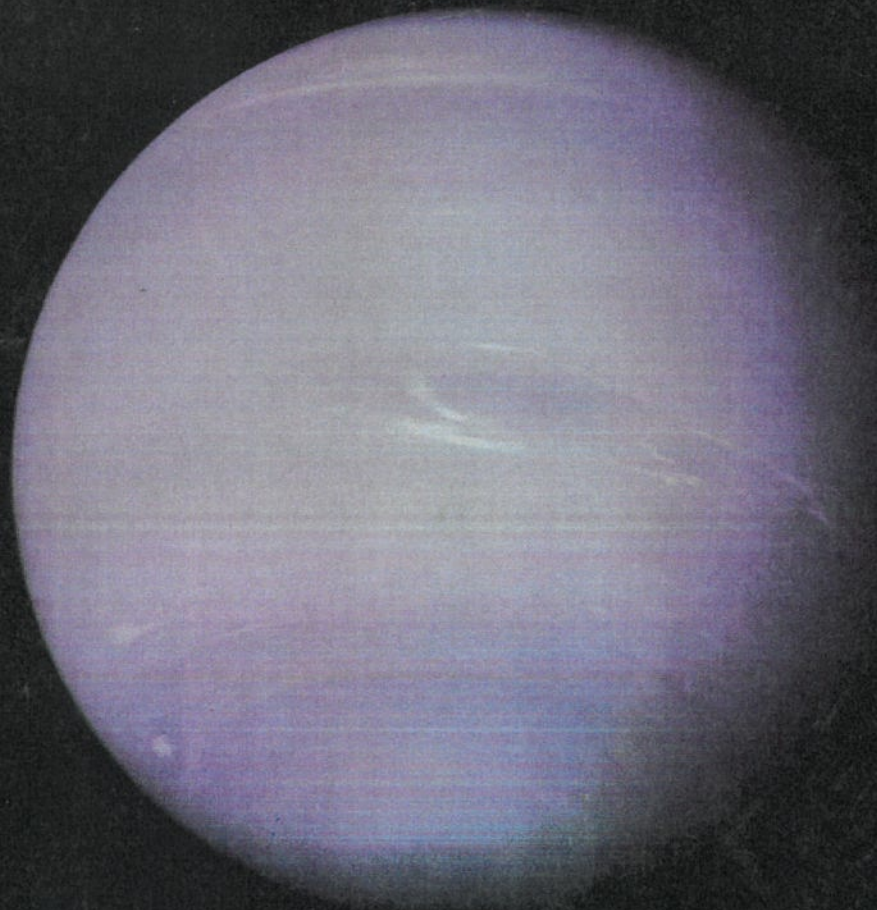
Period of rotation  
17 hours 14 minutes.

Number of moons 27.

Volume of planet  
compared with Earth  
63 times as big.

Minimum travelling  
time from Earth  
about nine years.





# NEPTUNE



**FROZEN SOLID**  
Triton, Neptune's largest moon.

## NEPTUNE FACTS

Diameter at equator  
49,530km.

Average temperature  
-214°C.

Average distance from  
sun 4498 million km.

Length of year  
165 Earth years.

Period of rotation  
16 hours 7 minutes.

Number of moons 13.

Volume of planet  
compared with Earth  
57 times as big.

Minimum travelling  
time from Earth  
about 12 years.

**T**hanks to Pluto being kicked off the planetary map, Neptune is now the most distant planet in the solar system.

This blue planet has a name to suit its composition.

Neptune seems largely liquid - possibly a deep ocean of liquid hydrogen.

As with Uranus, its blue appearance is a result of methane in the atmosphere. But Neptune is a brighter blue, which scientists believe is caused by an unknown component in the atmosphere.

Its atmosphere, which consists of hydrogen, helium and methane, is so dense it may constantly be transforming the methane into flecks of diamond that rain towards its core.

The planet's magnetic field is about 27 times more powerful than that of Earth.

It's also probably the windiest place in the solar system with winds roaring at close to 2400km/h.

In 1989 the Voyager 2 probe observed a storm in Neptune's southern hemisphere that was large enough to contain the entire planet Earth.

Neptune was discovered 163 years ago, after a French mathematician proposed the position and mass of an unknown planet that could cause the changes noticed in Uranus's orbit. A German astronomer using the proposed co-ordinates found Neptune on his first night of searching in 1846.

One of its moons, Proteus, orbits Neptune so rapidly it completes its circuit every 26 hours. Another moon, Triton, is the coldest place in the solar system at a deathly -235°C.

Amazingly, though Triton is frozen solid, it has active volcanic geysers - plumes of nitrogen gas that rise 8km into the atmosphere before being caught by high-altitude winds.

Not only does this moon travel in the opposite direction to Neptune's revolution, it's also moving imperceptibly towards its parent. One day they will surely collide.



## The Planets of our Solar System

celestial body *
atmospheric conditions
Galileo Galilei
Nicolaus Copernicus
Claudius Ptolemy
Equatorial diameter *
Hemisphere *
ambitious *
revolution *
elliptical orbit *
sulphuric acid
carbon dioxide
perspective
featureless
fascination

<b>4. Word Domino</b>	<b>5. Meanings *</b>
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Horizontal joins to e have a slightly bigger dip than ordinary horizontal joins. But don't make them too dippy, or they'll slow you down.



every lovely beast wears beauty power

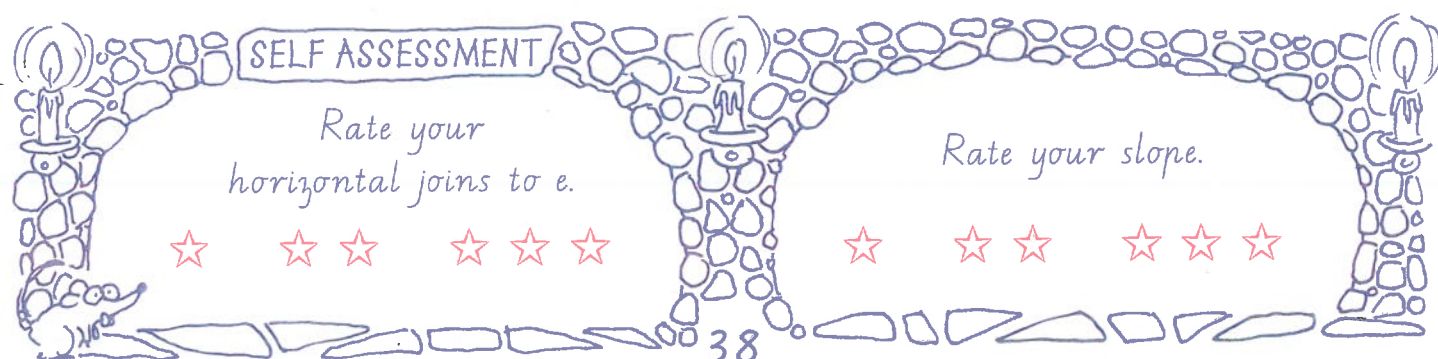
tattooed poet desperadoes echoed toenail manoeuvre

The Great Barrier Reef is the world's largest coral

reef. It is more than 2,000 km long and is forever

growing. It features an awesome variety of sea

creatures and multi-coloured corals.





Date: \_\_\_/\_\_\_/\_\_\_

Hints for fluent and legible writing – Joining to s

Remember to retrace the top of the s after a horizontal join, and to use the cut-off s after a diagonal join.



Kakadu National Park is a vast wilderness. Much of the land belongs to the Gagudju people, who have lived there for over 40,000 years. Kakadu's landscape features cliffs, ravines and waterfalls, as well as grasslands, forests, swamps and rivers. If you visit, beware of saltwater crocodiles — they'll attack anything that comes too close!

### SELF ASSESSMENT

Rate your joins to s.



Rate your fluency.





**Note:** Before you begin to read the text, answer Question 1 on the opposite page.

# Diseases

We live in a world filled with microbes—microscopic organisms such as viruses, bacteria and fungi. A spoonful of dirt contains billions of them. From your head to your toes, inside and out, you are home to trillions more of them. Most are harmless, and many are good—they help us digest our food, for example. However, some can make us sick. We call these bad ones germs.

## Lurking Germs

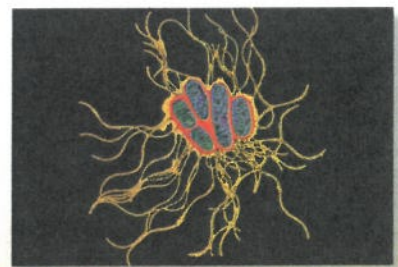
Germs enter our bodies through our noses, mouths or other openings. They may also enter through a cut in our skin. A single sneeze can propel millions of germs into the air. Hands that cover a cough deposit germs on desks, doorknobs and computer keyboards.

Diseases spread in many ways. We can become ill from germs in food that hasn't been handled or cooked properly. Water can be contaminated with germs—such as protozoa—especially in poor countries without sanitation facilities.

If germs surround us, why aren't we always sick? Most of the time, our bodies fight off germs. At times when you haven't been getting enough sleep or eating right, your resistance—your ability to fight off illness—decreases. Then it becomes easier for germs to mount a sneak attack.

## Germs Target Children

Children, especially young children, get sick more often than adults. One reason is that they don't keep their hands as clean as adults do. Also, their bodies have not yet mastered the art of recognising and fending off germs. The human immune system has the job of fighting germs. As we grow older, this system improves in its ability to quickly recognise and fight infection. This helps us to build immunity against many of the germs that made us sick as children.



Salmonella is a bacterium that can give you food poisoning or deadly typhoid fever.



Trichophyton rubrum, or ringworm, is a fungus that lives on—and eats—your skin.



This protozoan, *Entamoeba histolytica*, is found in foul water and the human gut. It causes stomach-aches and diarrhoea.



## Focus: Predicting - Making Predictions About Texts

Always look at the headings, subheadings and pictures before you read a text. Draw on your knowledge about the topic and experience of texts on the same topic to predict what the text will be about.

- 1 Scan the text's headings, subheadings and pictures. What do you think this text will be about? Why?

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## Literal Questions

- 2 Name three types of microbes mentioned in the first paragraph.

---

- 3 How do germs enter our bodies?

---

- 4 What can a single sneeze do?

---

- 5 List two ways diseases can be spread.

a 

---

b 

---

- 6 What decreases our resistance to germs?

---

- 7 What is the job of the human immune system?

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## Focus: Monitoring - Re-reading and Reading On

If you come to a new word that you do not know, re-read the sentence it is in. If that doesn't work, keep reading. Information that comes after the word may give you a clue as to what it means.

- 8 Write what you think the following words mean. Use the text to help you.

a microscopic

---

b propel

---

c contaminated

---

d sanitation

---

- 9 Use the word **contaminated** in a sentence of your own.

---

## Inference Questions

- 10 Which word in the last paragraph could be replaced with the words **fending off**?

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- 11 Why do some countries not have sanitation facilities?

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- 12 Do all microbes make us sick? Explain.

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# Comparing Fractions



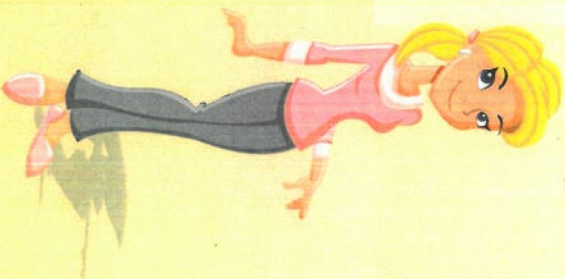
Write true or false to compare the fractions. Write all answers on your response sheet.

- |   |                             |    |                               |    |                               |
|---|-----------------------------|----|-------------------------------|----|-------------------------------|
| 1 | $\frac{1}{2} > \frac{1}{3}$ | 6  | $\frac{3}{4} > \frac{2}{3}$   | 11 | $\frac{3}{4} < \frac{11}{12}$ |
| 2 | $\frac{1}{3} < \frac{1}{4}$ | 7  | $\frac{11}{12} < \frac{5}{6}$ | 12 | $\frac{2}{3} = \frac{8}{12}$  |
| 3 | $\frac{1}{4} > \frac{1}{8}$ | 8  | $\frac{1}{6} = \frac{2}{12}$  | 13 | $\frac{8}{12} < \frac{3}{4}$  |
| 4 | $\frac{1}{2} < \frac{3}{8}$ | 9  | $\frac{1}{6} < \frac{1}{4}$   | 14 | $\frac{1}{4} = \frac{3}{12}$  |
| 5 | $\frac{3}{8} > \frac{3}{4}$ | 10 | $\frac{1}{3} > \frac{1}{2}$   | 15 | $\frac{1}{3} = \frac{4}{12}$  |

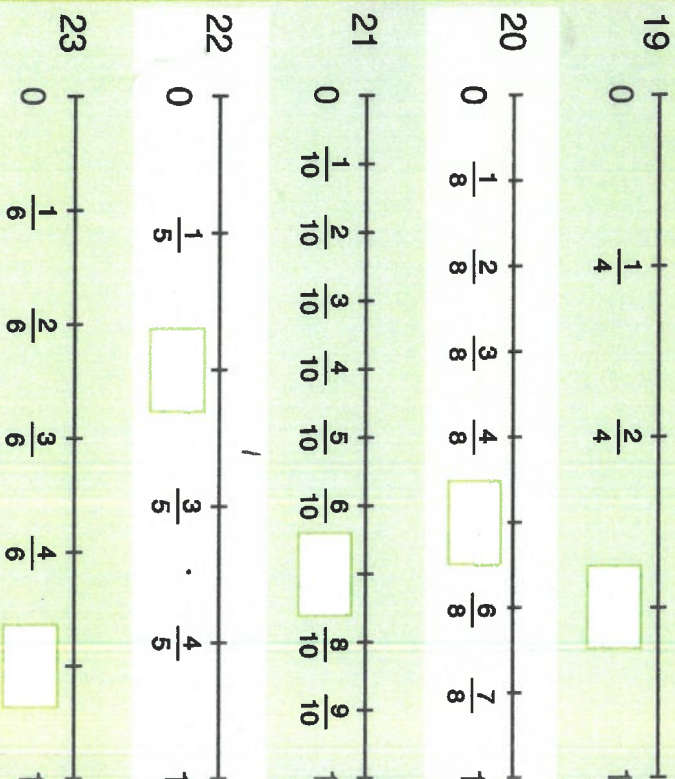
Order the fractions from smallest to largest. Separate your answers with a comma.

- |    |               |               |                |               |
|----|---------------|---------------|----------------|---------------|
| 16 | $\frac{1}{3}$ | $\frac{1}{4}$ | $\frac{1}{12}$ | $\frac{1}{8}$ |
| 17 | $\frac{1}{2}$ | $\frac{1}{4}$ | $\frac{1}{12}$ | $\frac{7}{8}$ |
| 18 | $\frac{2}{3}$ | $\frac{2}{8}$ | $\frac{2}{12}$ | $\frac{2}{6}$ |

> greater than  
< less than  
= equal to



Supply the missing fraction.



Use the pizza to solve the problems.



- 24 Adam ate  $\frac{1}{4}$  of the pizza above. How many eighths of the pizza did he eat?
- 25 Kelly ate  $\frac{1}{2}$  of the pizza for dinner and  $\frac{1}{8}$  of the pizza for breakfast. How many eighths of the pizza did she eat in total?

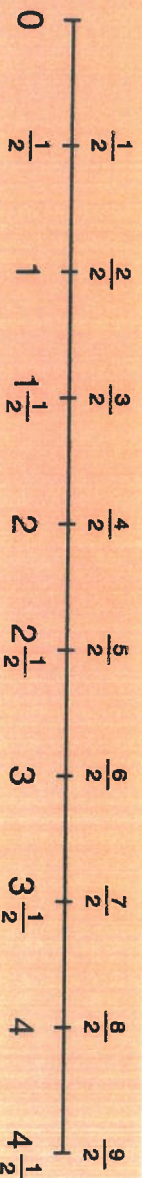


## Improper Fractions and Mixed Numerals

Improper fractions are fractions where the numerator is greater than the denominator, e.g.  $\frac{7}{4}$ ,  $\frac{7}{3}$ ,  $\frac{5}{4}$ ,  $\frac{9}{2}$ .

Mixed numerals are made up of a whole number and a fraction, e.g.  $1\frac{1}{3}$ ,  $2\frac{1}{4}$ ,  $3\frac{1}{2}$ .

Study the number lines below to answer the questions. Write all answers on your response sheet.



You can convert an improper fraction to a mixed numeral simply by dividing the numerator by the denominator.

$$\frac{7}{2} \text{ means } 7 \div 2 = 3\frac{1}{2}$$

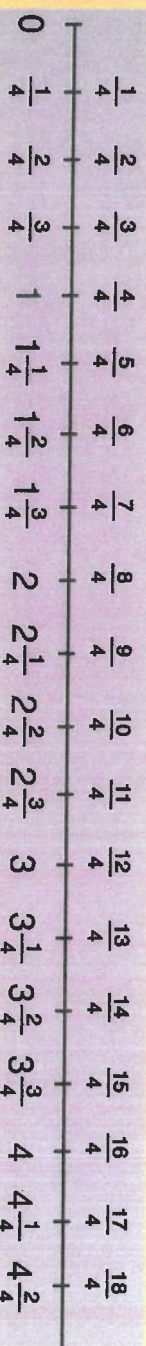


Write an equivalent mixed numeral for:

$$1\frac{3}{2} \quad 2\frac{5}{2} \quad 3\frac{9}{2}$$

Write an equivalent improper fraction for:

$$4\frac{1}{2} \quad 5\frac{2}{2} \quad 6\frac{1}{2}$$



Write an equivalent mixed numeral for:

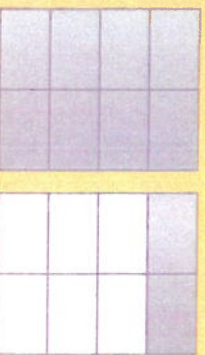
$$7\frac{6}{4} \quad 8\frac{11}{4} \quad 9\frac{15}{4}$$

Write an equivalent improper fraction for:

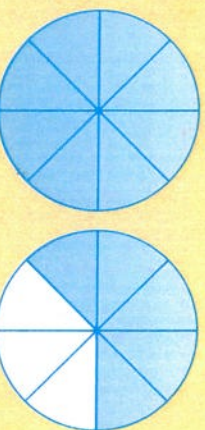
$$10\frac{1}{4} \quad 11\frac{2}{4} \quad 12\frac{3}{4}$$

Write a mixed numeral and an improper fraction to describe each model. Separate your answers with a comma.

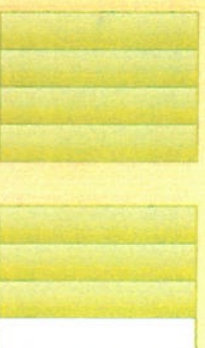
13



14



15



Convert each improper fraction to a mixed numeral.

$$16\frac{9}{4}$$

$$21\frac{7}{4}$$

$$17\frac{7}{5}$$

$$22\frac{11}{2}$$

$$18\frac{10}{4}$$

$$23\frac{10}{3}$$

$$19\frac{9}{6}$$

$$24\frac{11}{5}$$

$$20\frac{9}{8}$$

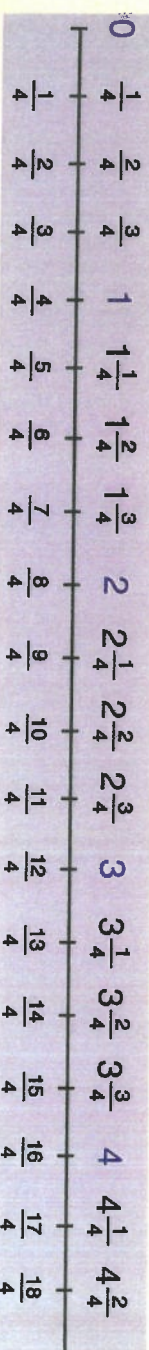
$$25\frac{13}{8}$$



## Improper Fractions and Mixed Numerals

Improper fractions are fractions where the numerator is greater than the denominator, e.g.  $\frac{7}{4}$ ,  $\frac{7}{3}$ ,  $\frac{5}{4}$ ,  $\frac{9}{2}$ .

Study the number lines below to answer the questions. Write all answers on your response sheet.



Convert each mixed numeral to an improper fraction. The number line may assist you.

1  $1\frac{1}{4}$

4  $2\frac{3}{4}$

7  $4\frac{1}{4}$

2  $1\frac{3}{4}$

5  $3\frac{1}{4}$

8  $4\frac{3}{4}$

3  $2\frac{1}{4}$

6  $3\frac{3}{4}$

9  $3\frac{1}{2}$

The number line above shows quarters. Use the number line to choose  $>$ ,  $<$  or  $=$  to insert into each statement below so that each is true.

10  $\frac{4}{4}$   1

13  $\frac{1}{2}$    $\frac{3}{4}$

$>$  greater than  
 $<$  less than  
 $=$  equal to

11  $\frac{8}{4}$   2

14  $2\frac{3}{4}$    $\frac{12}{4}$

12  $1\frac{1}{2}$    $\frac{3}{4}$

15  $\frac{5}{4}$    $1\frac{3}{4}$



Mixed numerals are made up of a whole number and a fraction, e.g.  $1\frac{1}{3}$ ,  $2\frac{1}{4}$ ,  $3\frac{1}{2}$ .

You can convert an improper fraction to a mixed numeral or whole number simply by dividing the numerator by the denominator.

$\frac{7}{2}$  means  $7 \div 2 = 3\frac{1}{2}$



Convert each improper fraction to a mixed numeral or a whole number.

16  $\frac{10}{4}$

21  $\frac{19}{4}$

17  $\frac{17}{4}$

22  $\frac{8}{4}$

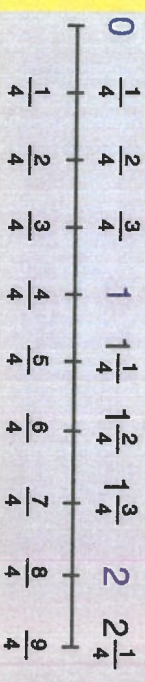
18  $\frac{15}{4}$

23  $\frac{12}{4}$

19  $\frac{5}{4}$

24  $\frac{16}{4}$

20  $\frac{18}{8}$



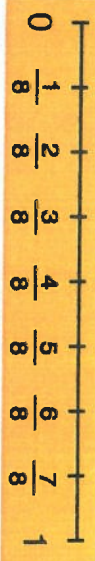
25 What mixed numeral is exactly halfway between  $1\frac{1}{4}$  and  $2\frac{1}{4}$ ?



## Adding and Subtracting Fractions

When you add or subtract like fractions the denominator remains the same, e.g.  $\frac{3}{5} + \frac{1}{5} = \frac{4}{5}$ .

Add the number sentences. The number lines may help you. Write all answers on your response sheet.



$$1 \quad \frac{6}{8} + \frac{1}{8} = \boxed{\phantom{00}}$$

$$3 \quad \frac{5}{8} - \frac{3}{8} = \boxed{\phantom{00}}$$

$$2 \quad \frac{7}{8} - \frac{2}{8} = \boxed{\phantom{00}}$$

$$4 \quad \frac{3}{8} + \frac{4}{8} = \boxed{\phantom{00}}$$



$$5 \quad \frac{11}{12} - \frac{4}{12} = \boxed{\phantom{00}}$$

$$8 \quad \frac{7}{12} + \frac{4}{12} = \boxed{\phantom{00}}$$

$$6 \quad \frac{9}{12} + \frac{2}{12} = \boxed{\phantom{00}}$$

$$9 \quad \frac{8}{12} - \frac{5}{12} = \boxed{\phantom{00}}$$

$$7 \quad \frac{10}{12} - \frac{7}{12} = \boxed{\phantom{00}}$$

$$10 \quad \frac{5}{12} + \frac{4}{12} = \boxed{\phantom{00}}$$

You can subtract fractions from whole numbers.

For example  $1 - \frac{3}{4} = \frac{1}{4}$



Solve the subtractions. The diagrams may help.

$$11 \quad \begin{array}{|c|c|c|c|} \hline x & & & \\ \hline \end{array} \quad 1 - \frac{2}{5} = \boxed{\phantom{00}}$$

$$12 \quad \begin{array}{|c|c|c|c|c|c|} \hline x & x & x & x & & \\ \hline \end{array} \quad 1 - \frac{4}{10} = \boxed{\phantom{00}}$$

$$13 \quad \begin{array}{|c|c|c|c|c|c|} \hline x & x & x & x & x & \\ \hline \end{array} \quad 1 - \frac{5}{8} = \boxed{\phantom{00}}$$

$$14 \quad \begin{array}{|c|c|c|c|c|c|} \hline x & & x & x & x & \\ \hline \end{array} \quad 1 - \frac{4}{6} = \boxed{\phantom{00}}$$

$$15 \quad \begin{array}{|c|c|c|c|c|c|} \hline x & x & x & x & x & \\ \hline \end{array} \quad 1 - \frac{4}{8} = \boxed{\phantom{00}}$$

# EASIER

Solve the problems.

- 16 Karen had a whole chocolate bar of 12 pieces. If she ate  $\frac{2}{12}$  of the bar, then  $\frac{5}{12}$ , how many pieces would be left?



- 17 Imran ate  $\frac{5}{8}$  of a pizza. If he left the rest in the refrigerator, what fraction of the pizza did he leave?



- 18 Zoe had a set of 12 coloured felt-tip pens but she lost 4 of them. What fraction of the set of pens did she lose?



- 19 Thomas had a small set of 8 golf clubs. If his brother borrowed three clubs, what fraction of the set has he got left?









- 20 Fiona had 12 metres of curtain material and used  $\frac{8}{12}$  of it. How many metres are left?

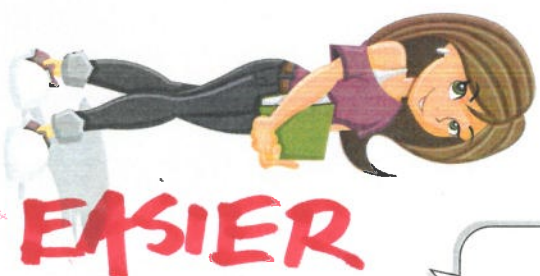




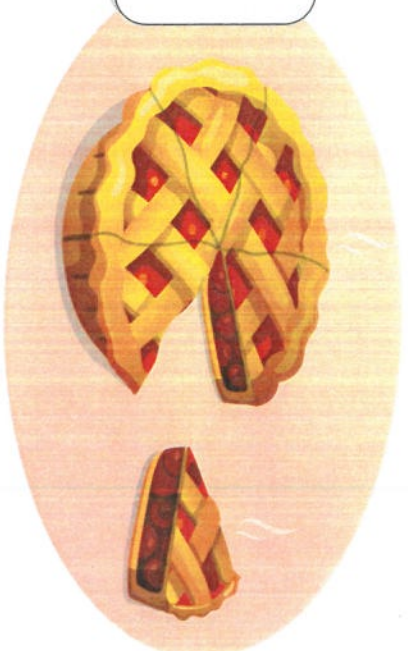
## Adding Fractions with Mixed Numeral Answers

Write the following modelled fractions as an improper fraction then as a mixed numeral. Write all answers on your response sheet. The first one is started for you.

	Improper fractions	Mixed numerals
1 	$\frac{3}{2}$	
2 		
3 		
4 		
5 		
6 		



$\frac{7}{5}$  is the same as  $1\frac{2}{5}$



Convert each improper fraction to a mixed numeral or a whole number to answer the problems.

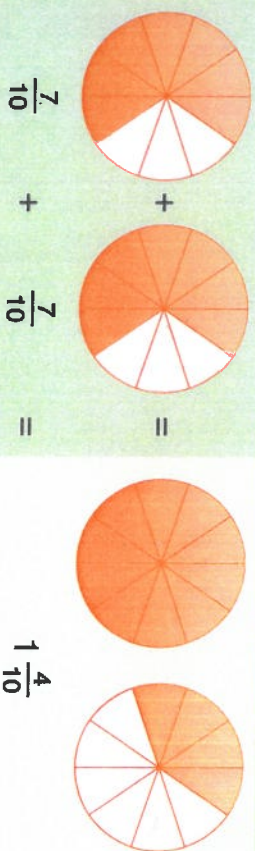
16 Jack ate  $\frac{5}{6}$  of a fruit pie on Monday and  $\frac{3}{6}$  of a fruit pie on Tuesday. How much fruit pie did he eat over the two days?

17 Freda ate  $\frac{2}{6}$  of a fruit pie and Sally ate  $\frac{4}{6}$ . How many pies did they eat in total?

18 Sam ate  $\frac{5}{6}$  of a fruit pie and Mohammed ate  $\frac{4}{6}$  of a fruit pie. How much pie did they eat combined?

19 Tim ate  $\frac{5}{6}$  of a fruit pie, Kelly ate  $\frac{4}{6}$  and Mia ate  $\frac{5}{6}$ . How much pie did they eat in total?

20 Hank was visiting from America. He loved fruit pies so on 3 consecutive days he ate  $\frac{3}{6}$  of a fruit pie. How much pie did he eat in total?



$$\frac{7}{10} + \frac{7}{10} = 1\frac{4}{10}$$



Add the fraction. Write all answers as an improper fraction then as a mixed numeral.

7  $\frac{3}{4} + \frac{3}{4} = \square$

10  $\frac{3}{8} + \frac{7}{8} = \square$

13  $\frac{4}{5} + \frac{4}{5} = \square$

8  $\frac{4}{5} + \frac{3}{5} = \square$

11  $\frac{6}{8} + \frac{5}{8} = \square$

14  $\frac{7}{8} + \frac{5}{8} = \square$

9  $\frac{7}{10} + \frac{6}{10} = \square$

12  $\frac{9}{10} + \frac{6}{10} = \square$

15  $\frac{9}{12} + \frac{5}{12} = \square$





1 whole																					
$\frac{1}{2}$																					
$\frac{1}{4}$					$\frac{2}{4}$					$\frac{3}{4}$											
$\frac{1}{8}$		$\frac{2}{8}$			$\frac{3}{8}$			$\frac{4}{8}$			$\frac{5}{8}$			$\frac{6}{8}$			$\frac{7}{8}$				
$\frac{1}{5}$				$\frac{2}{5}$				$\frac{3}{5}$				$\frac{4}{5}$									
$\frac{1}{10}$		$\frac{2}{10}$		$\frac{3}{10}$		$\frac{4}{10}$		$\frac{5}{10}$		$\frac{6}{10}$		$\frac{7}{10}$		$\frac{8}{10}$		$\frac{9}{10}$					
$\frac{1}{20}$	$\frac{2}{20}$	$\frac{3}{20}$	$\frac{4}{20}$	$\frac{5}{20}$	$\frac{6}{20}$	$\frac{7}{20}$	$\frac{8}{20}$	$\frac{9}{20}$	$\frac{10}{20}$	$\frac{11}{20}$	$\frac{12}{20}$	$\frac{13}{20}$	$\frac{14}{20}$	$\frac{15}{20}$	$\frac{16}{20}$	$\frac{17}{20}$	$\frac{18}{20}$	$\frac{19}{20}$			

**4** Use the equivalent fraction chart to add or subtract the like fractions.

- |   |  |  |
|---|--|--|
| a $\frac{1}{4} + \frac{1}{8} = \frac{3}{8}$ | h $\frac{6}{10} + \frac{1}{5} = \text{---}$  | o $\frac{5}{10} - \frac{3}{20} = \text{---}$ |
| b $\frac{1}{2} + \frac{1}{8} = \text{---}$  | i $\frac{7}{10} + \frac{1}{5} = \text{---}$  | p $\frac{7}{10} - \frac{4}{20} = \text{---}$ |
| c $\frac{1}{4} + \frac{1}{2} = \text{---}$  | j $\frac{1}{2} + \frac{3}{10} = \text{---}$  | q $\frac{9}{10} - \frac{9}{20} = \text{---}$ |
| d $\frac{1}{4} + \frac{3}{8} = \text{---}$  | k $\frac{1}{2} - \frac{1}{8} = \text{---}$   | r $\frac{4}{5} - \frac{3}{10} = \text{---}$  |
| e $\frac{3}{4} + \frac{1}{8} = \text{---}$  | l $\frac{1}{2} - \frac{1}{10} = \text{---}$  | s $\frac{3}{5} - \frac{7}{20} = \text{---}$  |
| f $\frac{3}{8} + \frac{1}{2} = \text{---}$  | m $\frac{3}{4} - \frac{1}{2} = \text{---}$   | t $\frac{1}{5} - \frac{1}{20} = \text{---}$  |
| g $\frac{5}{8} + \frac{1}{4} = \text{---}$  | n $\frac{3}{10} - \frac{1}{20} = \text{---}$ | u $\frac{3}{5} - \frac{3}{20} = \text{---}$  |

$\frac{1}{2} + \frac{1}{4}$   
that's  $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$



**5** Solve the problems.

- a Tom ate  $\frac{3}{5}$  of the pizza and Ava ate  $\frac{3}{10}$  of it. How much did they eat altogether? \_\_\_\_\_
- b Bella used  $\frac{1}{5}$  of the pages and Grace used  $\frac{3}{10}$ . How much did they use altogether? \_\_\_\_\_
- c Jack ate  $\frac{1}{4}$  of the pie and Emma ate  $\frac{3}{12}$  of it. How much pie did they eat altogether? \_\_\_\_\_

## SUPER QUESTION

**6** Use the equivalent fraction grid and the information you have learnt about improper fractions on page 15 to complete the following questions. The first one is done for you.

a $\frac{1}{2} + \frac{3}{4} =$ $= \frac{2}{4} + \frac{3}{4} = \frac{5}{4} = 1\frac{1}{4}$	d $\frac{4}{5} + \frac{4}{10} =$ $= + = =$	g $\frac{4}{5} + \frac{7}{20} =$ $= + = =$	j $\frac{3}{4} - \frac{3}{8} =$ $= - =$
b $\frac{1}{4} + \frac{7}{8} =$ $= \frac{2}{8} + \frac{7}{8} = =$	e $\frac{3}{5} + \frac{7}{10} =$ $= + = =$	h $\frac{3}{5} + \frac{11}{20} =$ $= + = =$	k $\frac{5}{6} - \frac{5}{12} =$ $= - =$
c $\frac{1}{2} + \frac{5}{8} =$ $= + = =$	f $\frac{4}{5} + \frac{9}{10} =$ $= + = =$	i $\frac{1}{2} + \frac{7}{10} =$ $= + = =$	l $\frac{2}{3} - \frac{7}{12} =$ $= - =$

# HARDER





# Maths Project -Term 3 2021



Your task is to plan a trip around Australia for your family. You need to visit as many places as you can, but you can't spend more than \$100,000, even if you need to purchase transport and caravans. You also must be away for at least one month, but not more than 3 months. You are expected to produce a power point with:

The vehicle(s) you will travel in, and the purchase costs. You may already own these vehicles, so there is no need to purchase them.(pictures)

A map with towns and roads you will visit and travel on. (map)

A grid with the distances you will travel, and the costs for fuel associated with your vehicle. eg

Start Place	Finish Place	Distance	Stay time	Accom. & Cost	What did you do there
Doreen	Cowes	164km	2 days	Big 4, Cowes, \$160	Swim, Surf, Penguins (\$260), Bike ride
Cowes	Tidal River	248km	4 days	Camping Gnd. \$200	Hiked, Tour (\$300), swam, surfed

The places you will stay, and for how long, with the cost of the stay. (pictures)

The tourist attractions you will visit, and how much it will cost for your family. (pictures)

Cost for fuel on average will be C\$1 .80 per litre for diesel, \$2 .00 for petrol and 75c for LPG. We will work out your fuel costs in the grade.



In real life you would have other things to consider to go on this trip. What would they be?

Tips: 1. Use a map to plan your route.

2. Use a grid to write down your distances, costs, accommodation

3. This must be presented in a Power Point. There are several ways to set this out, but a grid with distances and places visited is the best way to plan the trip.

After doing the grid, pages of the PPT could show sections of the trip, or each day, or the places visited, or the places you stayed.

4. Make an ESTIMATION for food. What does your family spend a week? Add a "special" meal a week at a restaurant that is famous in the area. Work it out over the whole trip.

5. ASK if you are finding something difficult, I have some previous year's examples to look at.







# AUSTRALIA

**LEGEND**

- Scale: 0 to 1000 km
- Scale: 0 to 1000 miles
- Major roads (red line)
- Minor roads (yellow line)
- Unimproved roads (green line)
- Waterways (blue line)
- Coastal waters (light blue)
- Land (green)
- Sea (blue)

**ADELAIDE**  
2011 BRISBANE  
1232 1276 CANBERRA  
2983 3463 3945 DARWIN  
743 1726 680 3750 MELBOURNE  
2719 4370 3715 4021 3462 PERTH  
1442 980 281 3875 908 4002 SYDNEY

Other cities in Australia are shown in smaller text.



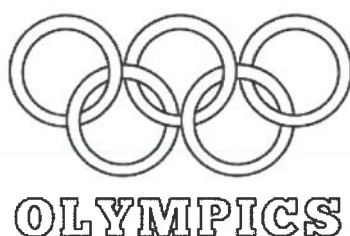
**Remote Learning 6.8.21 to 13.8.21 WEEK 5 Term 3**

The best way to contact me is by email [janine.green@education.vic.gov.au](mailto:janine.green@education.vic.gov.au).

Scheduled Zoom Meeting with Mrs Green

Wednesday 11.00am

	Activities & Instructions	Comments: Students, Parents &/or Teachers	Completed ✓
1	<b><u>Sound Waves</u></b> 1. Complete <b>Unit 17- Worksheet</b>		
2	<b><u>Language –</u></b> 1. Olympics- Grammar Cloze Activity - <b>Worksheet</b>		
3	<b><u>Poetry –</u></b> 1. Octopoeem – Following the formula to write an 8 lined poem about a pet or a person or an animal.		
4	<b><u>Maths Mate-</u></b> Complete the level you have been doing in class. <b>You do not need to do both</b>  <b>1- Easier Maths Mate 6 – T1 -Sheet 4</b> <b>2- Harder Maths Mate 7 – T1- Sheet 4</b>		
5	<b><u>Maths – Measurement – Angles</u></b>  1- AMBER 3- 2D Shapes and Transformation 2- Revising polygons		
6	<b><u>Studyladder – Set tasks-</u></b> Website <a href="http://www.studyladder.com.au">www.studyladder.com.au</a>  <i>If you have forgotten your log on password, please email me.</i>		
7	<b><u>Times Tables</u></b> 1- Complete Times Tables worksheet		







## List Words

minor  
insight  
diary  
iron  
style  
trial  
polite  
inspire  
entire  
entitle  
retirement  
excitedly  
replying  
surprisingly  
privately  
supplier  
multiply  
designer  
society  
licence  
license  
organisation  
acclimatise  
microscope  
indescribable

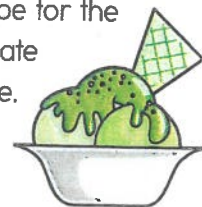
- 1 Colour the graphemes that represent **i\_e y igh i ie** in the List Words.

- 2 Go to the List Words for Unit 17. Count the sounds and identify all the graphemes in each List Word.

- 3 Write any other letters that can represent **i\_e y igh i ie** on the Grapheme Chart. Write one word example for each.

- 4 Cross out all words containing the letter i where you do not hear **i\_e y igh i ie**.

The brilliant designer signalled spoke politely to the children students as they guiltily excitedly made surprisingly interesting inspired comments about the mischief latest fashions ideas for computer games. He explained described how he uses a special microscope for the preliminary trials to weigh iron out the many friendly problems that complicate arise as he hurriedly builds designs each new soldier type of fatigued game.



1. How did the designer speak? \_\_\_\_\_  
2. How were the students speaking? \_\_\_\_\_  
3. What kind of comments did they make? \_\_\_\_\_  
4. What does he use in his trials to iron out problems? \_\_\_\_\_

- 5 Write graphemes to represent **i\_e y igh i ie** to finish these List Words.

d\_ary      insp\_re      soc\_ety      ins\_\_\_\_t      accl\_mat\_s\_  
st\_le      l\_cence      multipl\_\_\_\_      des\_gner      organ\_\_sation  
tr\_al      l\_cense      repling      exc\_\_\_\_tedly      indescr\_\_bable

- 6 Write the missing digraphs in these words.

enti\_\_\_\_      licen\_\_\_\_      replyi\_\_\_\_      reti\_\_\_\_ment      a\_\_limat\_\_s\_  
\_\_\_\_on      licen\_\_\_\_      su\_\_li\_\_\_\_      microsc\_\_p\_\_      \_\_ganisa\_\_on  
pol\_\_t\_\_      min\_\_\_\_      priva\_\_ly      desi\_\_\_\_      s\_\_prisi\_\_ly

- 7 Write words built from the verbs ending with the suffix **fy** in the brackets to finish the sentences.

★ The verb forming suffix **fy** can mean to *make, become or cause*. Remember to change **y** to **i** before adding **es** and **ed**.

- A \_\_\_\_\_ glass allows us to observe enlarged images of tiny insects. (magnify)  
The colour, red, on a large sign, often \_\_\_\_\_ danger. (signify)  
Gentle rocking often \_\_\_\_\_ a crying baby. (pacify)  
The crowd watched the \_\_\_\_\_ fireworks display in amazement. (electrify)  
Nitrogen is a gas that can be \_\_\_\_\_ and used to treat sun spots on our skin. (liquefy)

## Grapheme Chart

grapheme	word



**8 Write words from the brackets to finish the sentences.**

★ **Licence:** (noun) official permission often as a certificate.

**License:** (verb) to give official permission. *If you have a car driver's licence you are licensed to drive cars.*



Permits from a government authority sometimes \_\_\_\_\_ people to shoot excessive numbers of wildlife that are endangering the lives of people and other animals. (license, licence)

Very few people have a \_\_\_\_\_ to drive huge mining machinery. (license, licence)

Farmers often keep a \_\_\_\_\_ on the progress of each of their \_\_\_\_\_ cows. (dairy, diary)

These birds are \_\_\_\_\_ different from the last flock which was very \_\_\_\_\_. (quite, quiet)

I \_\_\_\_\_ when I said I had not \_\_\_\_\_ on the bed wearing my dirty shoes. (lain, lied)

The weary boy was so \_\_\_\_\_ that even though he \_\_\_\_\_ very hard, he \_\_\_\_\_ up the horse too loosely so that the horse could pull itself free and run away. (tied, tired, tried)

The engineer gave us some in \_\_\_\_\_ into the difficulties of the building \_\_\_\_\_. (sight, site)

**9 Write words from the list under the roots and meanings from which they have developed.**

inspire describe excitedly multiply designer microscope

cit (Latin) stir up	multus (Latin) many	micro (Greek) small	scrib (Latin) write	signum (Latin) a sign	spiro (Latin) breathe

**10 Write List Words that have the same or similar meaning as the other words in each group.**

smaller, lesser, insignificant, \_\_\_\_\_ cut, design, fashion, \_\_\_\_\_ practice, try, test, \_\_\_\_\_

total, complete, whole, \_\_\_\_\_ not able to be described, beyond description, \_\_\_\_\_

secretly, separately, confidentially, \_\_\_\_\_ civilisation, culture, humanity, \_\_\_\_\_

adjust, accustom, adapt, \_\_\_\_\_ allow, authorise, enable, \_\_\_\_\_

**Challenge**

**Colour** the words, all ending in **ise** or **yse**, working around the outside and into the centre like a spiral. **Number** the meanings to match the words in the order that you find them.

★ The verb forming suffixes **ise** and **yse** can mean to **make, become** or **cause**.

**Meanings**

- \_\_\_\_\_ make private
- \_\_\_\_\_ form a colony
- \_\_\_\_\_ make popular
- \_\_\_\_\_ put in hospital
- \_\_\_\_\_ make harmonious
- \_\_\_\_\_ become a specialist
- \_\_\_\_\_ arrange individually
- \_\_\_\_\_ make in a certain style
- \_\_\_\_\_ give order to something
- \_\_\_\_\_ make a critical comment
- \_\_\_\_\_ make a general statement
- \_\_\_\_\_ become used to a climate
- \_\_\_\_\_ make public
- \_\_\_\_\_ breath test
- \_\_\_\_\_ say sorry
- \_\_\_\_\_ make tranquil

Start here!

i	n	d	i	v	i	d	u	a	l	i	s	e	s	t	y	i
e	t	r	a	n	q	u	i	l	i	s	e	i	p	r	i	s
s	a	r	m	o	n	i	s	e	o	r	g	a	n	i	s	v
i	h	t	i	s	e	n	b	r	e	a	t	h	a	l	e	a
g	p	a	e	s	p	e	c	i	a	l	i	s	e	y	p	t
o	e	m	s	i	l	a	t	i	p	s	o	h	e	s	o	i
l	s	i	l	c	c	a	i	e	s	i	r	a	l	u	p	s
o	i	c	i	l	b	u	p	e	s	i	n	o	l	o	c	e
p	a	r	e	s	i	l	a	r	e	n	e	g	e	s	i	c

★ Read hidden letters left to right as in a normal Word Search

Hidden Word \_\_\_\_\_ ing!



NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

# OLYMPICS

## Grammar-in-Context

- Complete the article by circling the correct words.

Athletes competed in the first Olympic Games in Greece almost three thousand years ago in 776 BC. Every four years, people from Greek city-states (and later the Roman empire) (1)\_\_\_\_\_ to a place called Olympia to (2)\_\_\_\_\_ the games, which continued until 393 AD. They lasted from (3)\_\_\_\_\_ one and five days, and only men were allowed to compete in the games. Many of the sports events were similar to those found in (4)\_\_\_\_\_ modern games where athletes run, jump and throw.

The modern Olympic Games began with the creation of the International Olympic Committee (the IOC) in 1894 and Greece (5)\_\_\_\_\_ the first country to hold the games, in the city of Athens, in 1896. Fourteen countries with 241 athletes competed in forty-three events. (6)\_\_\_\_\_ some people wanted to have the games in Athens every four years, the IOC decided to have (7)\_\_\_\_\_ in different countries and cities. In 1900, they were held (8)\_\_\_\_\_ Paris and women were allowed to compete in the games for the first time. The first Winter Olympic Games were held in 1924 and athletes competed in events such as skating and ice hockey. Over 200 countries now (9)\_\_\_\_\_ in the Summer Olympic Games. The number of events has increased to 300 events and instead of five days of competition, the games now (10)\_\_\_\_\_ for seventeen days.

There are some problems, however. There were (11)\_\_\_\_\_ Olympic games held in 1916, 1940 and 1944 because of war. Also, some athletes use drugs to help them win. In addition, the games (12)\_\_\_\_\_ very expensive. The 2014 Winter Games in Sochi, for example, cost \$US50 billion. Nevertheless, the Olympic Games continue to be extremely popular all over the world.

1.

- (A) travel
- (B) travels
- (C) traveled
- (D) traveling

2.

- (A) watches
- (B) watched
- (C) watching
- (D) watch

3.

- (A) between
- (B) after
- (C) to
- (D) towards

4.

- (A) today's
- (B) today
- (C) todays
- (D) todays'

5.

- (A) were
- (B) was
- (C) is
- (D) are

6.

- (A) However
- (B) Although
- (C) Therefore
- (D) Because

7.

- (A) they
- (B) their
- (C) them
- (D) there

8.

- (A) to
- (B) for
- (C) on
- (D) in

9.

- (A) compete
- (B) competing
- (C) competed
- (D) competes

10.

- (A) lasts
- (B) lasted
- (C) last
- (D) were lasting

11.

- (A) not
- (B) no
- (C) don't
- (D) didn't

12.

- (A) is
- (B) are
- (C) can
- (D) does



## OCTO- POEM

An Octo Poem just involves using interesting language to fill the 8 lines.  
You have to use the topic prompts in brackets next to each line.  
TOPIC - Describe a pet or a person or an animal.

**Line 1-** (A colour)\_\_\_\_\_

**Line 2-** (A season)\_\_\_\_\_

**Line 3-** (A place)\_\_\_\_\_

**Line 4-** (A type of weather)\_\_\_\_\_

**Line 5-** (A type of clothing)\_\_\_\_\_

**Line 6-** (A piece of furniture)\_\_\_\_\_

**Line 7-** (A TV show)\_\_\_\_\_

**Line 8-** (A type of food)\_\_\_\_\_

**example-**

***Wild, grey outdoor cat***

***Hungry for summer treats***

***Draped and lazy across my front step***

***When steamy summer thunderstorms rumble through***

***She pants and huddles inside her war torn fur coat***

***Our old, scruffy doormat is her bed***

***Feline survivor***

***Thriving at the neighbourhood buffet***



Name: .....

Due Date: ..... / ..... / .....

Parent's Signature: .....

QUOTE OF THE WEEK

Be yourself. Who else is better qualified?  
Frank Giblin

1. [+ Whole Numbers to 10]

	4	2	6	9	10	3	7	1	8	5
+ 6										

2. [- Whole Numbers to 10]

	13	15	6	14	7	9	11	8	10	12
- 5										

3. [x Whole Numbers to 12]

	2	8	1	4	5	7	6	9	3	10
x 2										

4. [+ Whole Numbers to 12]

	15	27	12	30	24	18	9	21	36	33
÷ 3										

5. [Large Number +, -]

$$\begin{array}{r} 8197 \\ - 1032 \\ \hline \end{array}$$

10. [Fraction x, ÷] \*

$$7 \times \frac{2}{5} =$$

16. [Order of Operations] \*

$$24 \div 3 \times 4 =$$

6. [Large Number x, ÷]

$$\frac{57000}{100} =$$

11. [Percentages]

Write as a percentage:  
23 out of 100.

17. [Exploring Number]

4075 > 4507  
True or false?

12. [Decimals / Fractions / Percentages]

What percentage of the  
shape is shaded?

18. [Multiples / Factors / Primes] \*

List the common multiples  
of 2 and 4 up to 20.

7. [Decimal +, -]

$$\begin{array}{r} 4.26 \\ + 1.38 \\ \hline \end{array}$$

13. [Integers]

Which insect can endure the  
lowest temperature?

- A)  $-24^{\circ}\text{C}$  cucujus beetle  
B)  $-51^{\circ}\text{C}$  gall wasp larvae  
C)  $-10^{\circ}\text{C}$  stink bug  
D)  $-184^{\circ}\text{C}$  red flat bark beetle

19. [Number Patterns]

Complete the pattern:

2, 10, 18, 26, 34, \_\_\_\_\_

8. [Decimal x, ÷]

$$\begin{array}{r} 0.3 \\ \times 6 \\ \hline \end{array}$$

14. [Rates / Ratios]

Simplify the ratio 5 : 90

20. [Expressions]

Simplify  
 $r + r + r + r + r$ 

9. [Fraction +, -]

$$\frac{3}{8} + \frac{4}{8} =$$

15. [Indices / Square Roots]

Write the product as a  
power:

$$3 \times 3 \times 3 \times 3 \times 3 =$$

21. [Substitution] \*

If  $p = 9$ , find the  
value of  $p + p - 5$ 

22. [Equations]

$$\square + 13 = 23$$



# MATHS MATE

## Term 1 - Sheet 4

6

Name: \_\_\_\_\_

Due Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Parent's Signature: \_\_\_\_\_

1. [+ Whole Numbers to 10]

	7	5	6	4	1	8	2	9	10	3
+ 8										

2. [- Whole Numbers to 10]

	13	11	9	14	15	16	17	12	10	8
- 7										

3. [× Whole Numbers to 10]

	7	5	6	4	1	8	2	9	10	3
× 6										

4. [÷ Whole Numbers to 10]

	56	21	35	14	63	70	7	42	49	28
÷ 7										

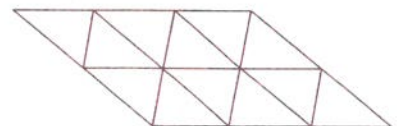
5. [Large Number +]

3	1	3
2	2	5
1	0	1
+ 20		
<div></div>		

8. [Large Number ×]

1	0	2
× 4		
<div></div>		

11. [Fractions]

Shade in  $\frac{1}{3}$  of one half of this parallelogram.

6. [Large Number -]

5	1	8	2
- 4041			
<div></div>			

9. [Large Number ÷]

<div></div>
3 ) 9000

12. [Place Value]

What is the value of the numeral 3 in the number 5632?

13. [Order of Operations]

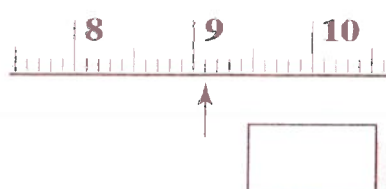
$18 - 9 - 2 =$

7. [Powers of 10 ×, ÷]

6	5
× 1000	
<div></div>	

10. [Decimals]

What number is shown by the arrow on the scale?



14. [Word Numbers]

Express in numerals:

Three hundred and thirteen

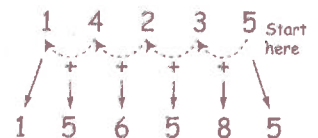
15. [Number Patterns]

2, 10, 18, 26, 34, \_\_\_\_\_

### MULTIPLYING BY 11

Find the answer to multiplications like  $14\,235 \times 11 = 156\,585$  easily.

- ♦ Write down the right hand digit, in this case 5.
- ♦ Add the digits in pairs, starting from the right.
- ♦ To finish, write down the left hand digit, in this case 1.



Try your skill:

$2345 \times 11$

$38\,234 \times 11$

Answers: 25795, 420574

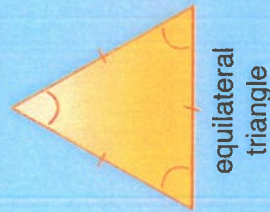


# Amber 3 2D Shapes and Transformations

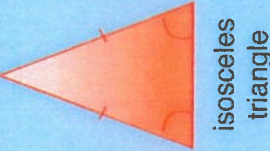
Please DO NOT write on cards

## Triangles

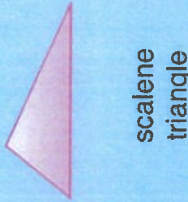
There are 4 major types of triangles.



equilateral triangle



isosceles triangle



scalene triangle



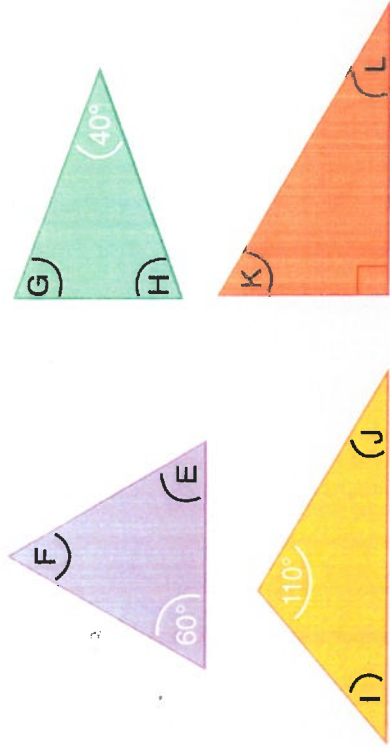
right-angle triangle

Study the triangles before answering the questions. Write all answers on your response sheet.

- 1 Which triangle has all its sides the same length?
- 2 Which triangle has 2 of its sides the same length?
- 3 Which triangle has a right angle?
- 4 Are all the sides on a scalene triangle the same length?
- 5 Which triangle has 2 of its angles the same size?
- 6 Which triangle has 3 of its angles the same size?



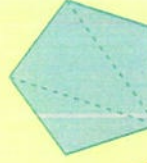
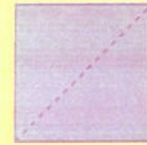
- 7 Name triangle A
- 8 Name triangle B
- 9 Name triangle C
- 10 Name triangle D
- 11 Is it possible for triangle C to be both a right-angle triangle and an equilateral triangle?
- 12 Is it possible for triangle D to be both a right-angle triangle and an isosceles triangle?



Measure the angles using a protractor.

- |            |            |
|------------|------------|
| 13 angle E | 17 angle I |
| 14 angle F | 18 angle J |
| 15 angle G | 19 angle K |
| 16 angle H | 20 angle L |

- 21 What is the sum, in degrees, of the angles in each triangle above?



Now you know the sum of the angles in each triangle, calculate the angle sum of the shapes that have been broken into triangles for you.

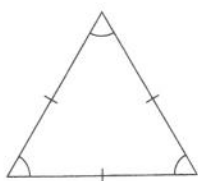
- |                |                  |
|----------------|------------------|
| 22 the square  | 24 the trapezium |
| 23 the hexagon | 25 the pentagon  |



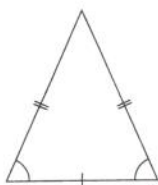
A **polygon** is any two-dimensional shape that has three or more straight sides and angles.

- 8** Name the four types of triangles. scalene, isosceles, right angle, equilateral

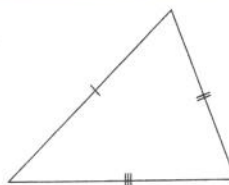
**a**



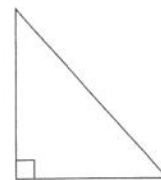
**b**



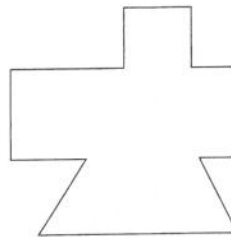
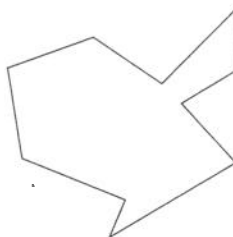
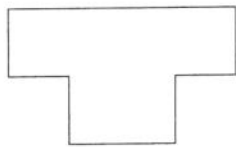
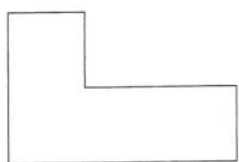
**c**



**d**



- 9** Draw lines to match the regular and irregular polygons to their names.



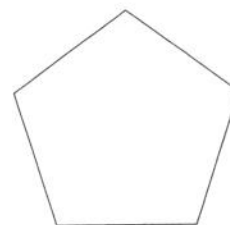
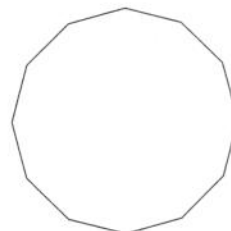
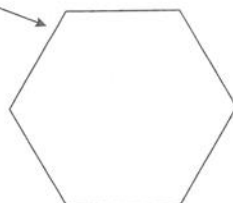
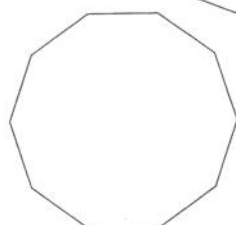
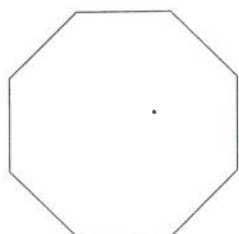
pentagon

hexagon

octagon

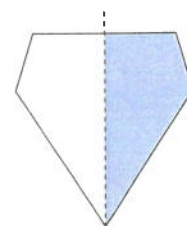
decagon

dodecagon



- 10** Record the properties of these regular polygons.

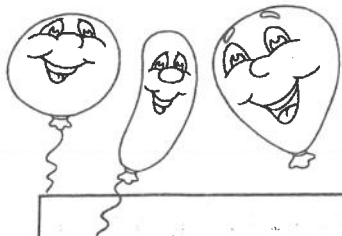
	Illustration	Name	Number of sides	Number of angles	Number of axes of symmetry
<b>a</b>					
<b>b</b>					
<b>c</b>					



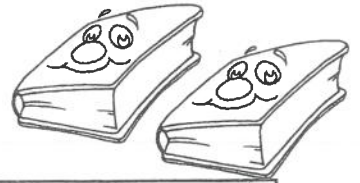
An axis of symmetry divides a shape into halves.







# MIXED TIMES TABLES



Fill in the missing numbers.

Write over the number sentences and say them out loud as you fill in the correct answers.

$3 \times \underline{\quad} = 30$

$4 \times \underline{\quad} = 8$

$11 \times \underline{\quad} = 110$

$10 \times \underline{\quad} = 20$

$7 \times \underline{\quad} = 28$

$3 \times \underline{\quad} = 12$

$6 \times \underline{\quad} = 12$

$3 \times \underline{\quad} = 15$

$10 \times \underline{\quad} = 100$

$7 \times \underline{\quad} = 14$

$9 \times \underline{\quad} = 36$

$4 \times \underline{\quad} = 16$

$9 \times \underline{\quad} = 18$

$6 \times \underline{\quad} = 24$

$5 \times \underline{\quad} = 50$

$12 \times \underline{\quad} = 48$

$7 \times \underline{\quad} = 70$

$1 \times \underline{\quad} = 10$

$11 \times \underline{\quad} = 22$

$3 \times \underline{\quad} = 6$

$5 \times \underline{\quad} = 10$

$5 \times \underline{\quad} = 20$

$3 \times \underline{\quad} = 30$

$8 \times \underline{\quad} = 32$

$9 \times \underline{\quad} = 90$

$6 \times \underline{\quad} = 12$

$5 \times \underline{\quad} = 20$

$12 \times \underline{\quad} = 24$

$7 \times \underline{\quad} = 28$

$1 \times \underline{\quad} = 2$

$11 \times \underline{\quad} = 44$

$3 \times \underline{\quad} = 30$

$8 \times \underline{\quad} = 16$

$10 \times \underline{\quad} = 20$

$3 \times \underline{\quad} = 12$

$8 \times \underline{\quad} = 80$

$28 \div \underline{\quad} = 7$

$33 \div \underline{\quad} = 11$

$24 \div \underline{\quad} = 6$

$16 \div \underline{\quad} = 8$

$21 \div \underline{\quad} = 7$

$18 \div \underline{\quad} = 6$

$20 \div \underline{\quad} = 10$

$60 \div \underline{\quad} = 6$

$12 \div \underline{\quad} = 6$

$36 \div \underline{\quad} = 9$

$27 \div \underline{\quad} = 9$

$14 \div \underline{\quad} = 7$

$40 \div \underline{\quad} = 10$

$10 \div \underline{\quad} = 5$

$24 \div \underline{\quad} = 8$

$70 \div \underline{\quad} = 7$

