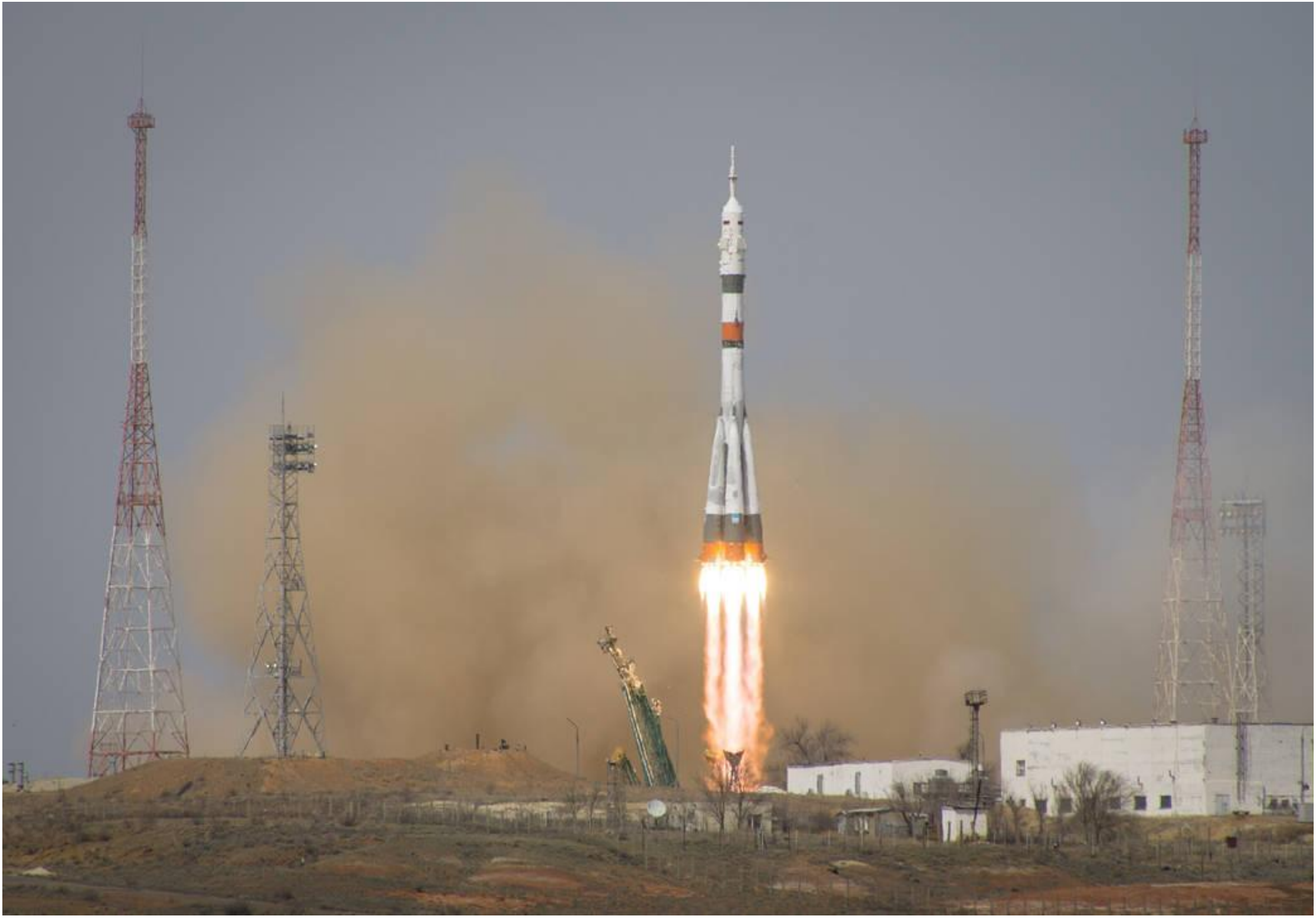
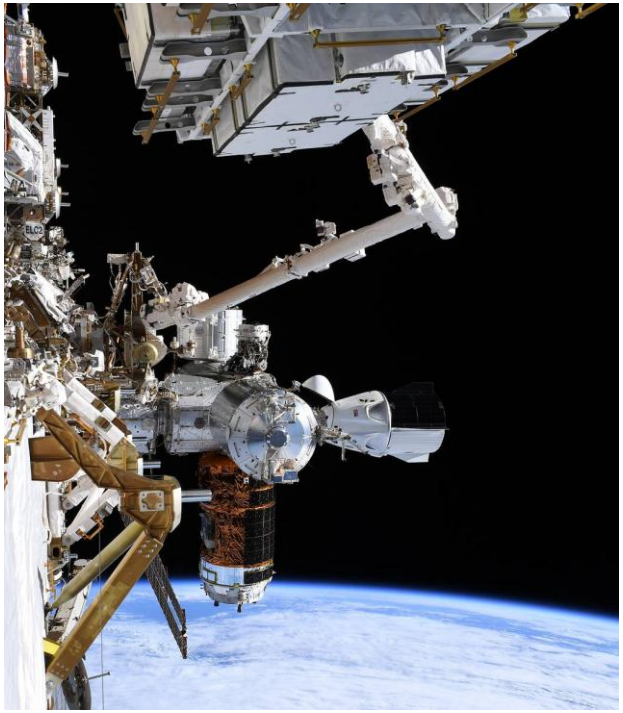




It is that time again year 5! Time to continue our exciting journey through the Solar System! Last week I asked why it is called the solar system. Well, solar means determined by the Sun, anything that is solar requires the sun to function, just as all the planets need the Sun to function. The Sun is the center of our system of planets. Can you think of anything else that uses the word solar?

You last left me sitting on Mars watching a blue sunset, now it is time to take off again and visit the remaining planets. Make sure you bring a space suit, these planets can be deadly!

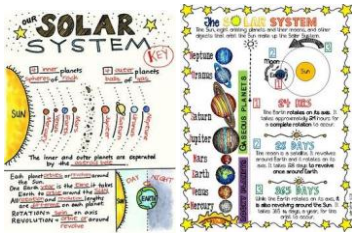
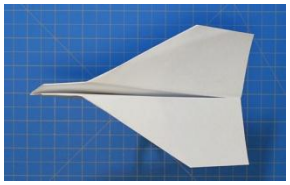
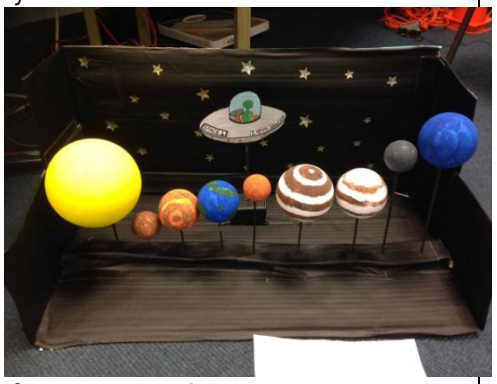
I want to say a massive thank you to those of you who are continuing to learn new things at home and who have been safe and sensible. It has been a very difficult time, but we can all be proud of how we have responded and kept our families safe. Thank you for sharing your learning with us and all your teachers can not wait to see you again soon. Stay safe, look after each other and make the most of this time at home.

Thank you parents, you are doing a great job!

Keep sharing with us through ***homelearning@greenlane.ngfl.ac.uk*** and keep reading on Bugclub, spelling on Spelling Shed and rockin' on Rockstars.

Kind regards,

Mrs Lee, Mr Kicks, Mr West, Mrs Kicks, Mrs Soren, Mrs Nessa, Mr Ijaz, and Ms Grove.

# Space project ## Extra activities and ideas to add to your project	***Reading:*** Add to your giant poster from last time showing off the new knowledge you have now! Try not to copy. What can you remember from your reading? While reading make some notes, I like to draw little pictures to remind me of the facts I have read.  	***Mental well being:*** Mrs Townend has been creating beautiful origami, which is the ancient art of paper folding! In this pack you will find instructions for making paper airplanes! See how far your creations will fly. 	***Art:*** Could you build a model of our solar system?  If not paint or draw it!
Talk activity: Soon we will be returning to school, but it will be a bit different. Talk to your family about how you are feeling. Are you excited, a little bit worried or even feeling scared? When having dinner in the Kicks' household we talk about what we are most looking forward to when we get back to school! Noah is looking forward to after school clubs. Annie just can't wait to start reception!	***Drama:*** Can you write and perform a play for your family? You could be the narrator, taking them on a trip through the Solar System! The couch could be your rocket ship. Pretend the living room carpet (or a towel) is a magic carpet and take your siblings on a space adventure! 	Writing: Because we cannot do transition this year your new teacher will be writing a letter all about themselves as an introduction. Could you write a letter about yourself? Think about what you want your new teacher to know. What hobbies do you have? What is your favourite thing to do? What type of learner are you?	***Physical wellbeing:*** Recently Noah completed the 1km a day challenge to support the National Health Service. He ran 1Km every day for 7 days! Give it a try!

If you do have access to the internet NASA has amazing information on its various platforms! Try https://science.nasa.gov/solar-system

You can also try https://www.nationalgeographic.com/science/space/solar-system

AS WE LEAVE MARS BEHIND AND HEAD FURTHER AWAY FROM THE SUN WE COME NEXT TO JUPITER!

The fifth planet from the sun, Jupiter is what watercolour dreams are made of. Vibrant bands of clouds ripple around its thick atmosphere, making up a world so large that more than 1,300 Earths could fit inside. Its Great Red Spot seems to peer out from the swirling vapours like an enormous eye in the face of a striped giant.

Though seemingly serene when viewed from the relative safety of our home world, Jupiter is a chaotic and stormy place. The gas giant planet's spots and swirls come from massive storms that whip up prevailing winds as fast as 335 miles an hour at the equator—faster than any known winds on Earth.

That includes the Great Red Spot, which is a massive hurricane-like storm called an anticyclone. It's far bigger and longer lasting than any tempests that have ever raged across our planet's surface: It rotates in an ever-present oval that's more than the width of the entire Earth, although it has been shrinking for as long as humans have been observing it.

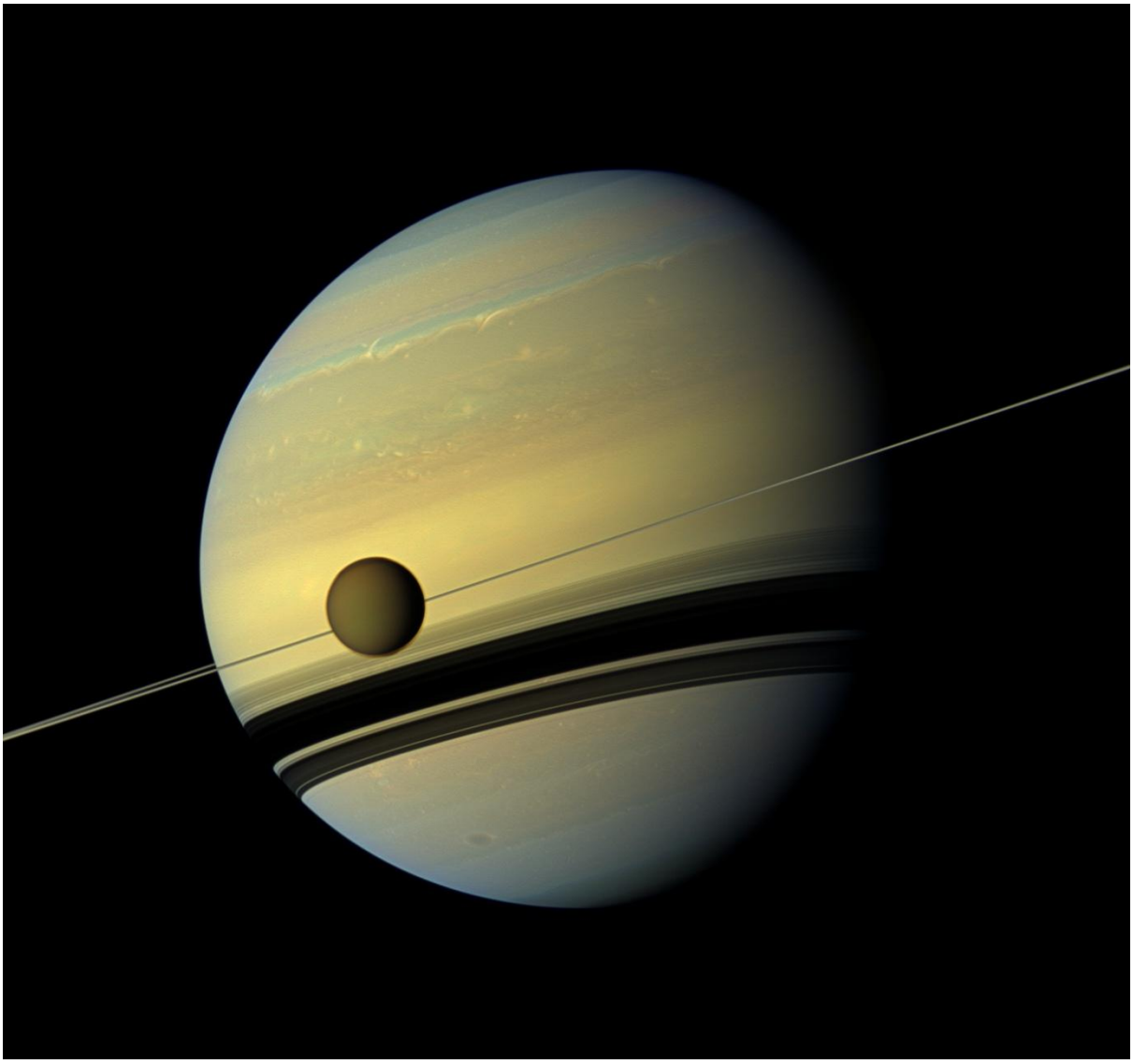
Jupiter is a massive ball of gas. Its clouds are composed of ammonia and water vapor drifting in an atmosphere of hydrogen and helium. The particular cloud chemistries are likely the magic behind the planet's vibrant colors, but the exact reasons for Jupiter's painted appearance remains unknown.

The planet's fast spin on its axis means that one Jupiter day lasts less than 10 Earth hours, and it sparks electrical currents that may drive the planet's intense and massive magnetic field, which is 16 to 54 times as powerful as Earth's.

Jupiter is the second brightest planet in the night sky, after Venus, which allowed early astronomers to spot and study the massive planet hundreds of years ago. In January 1610, astronomer Galileo Galilei spotted what he thought were four small stars tagging along with Jupiter. These pinpricks of light are actually Jupiter's four largest moons, now known as the Galilean moons: Io, Europa, Ganymede, and Callisto.

Since Galileo first laid telescope-enhanced eyes on Jupiter, scientists have continued to study the curious world from both the ground and the sky. In 1979, NASA's Voyager 1 and 2 spacecraft zipped by the gas giant, taking tens of thousands of pictures as they passed by. Among the surprises from these missions, the data revealed that giant Jupiter sports thin, dusty rings.

WOW, WELL WE HAD BEST NOT STOP LONG IT IS A BIT WINDY AND MY UMBRELLA HAS BEEN BLOWN AWAY… NEXT WE FLY TO SATURN!



Saturn is the sixth planet from the Sun and the second largest planet in our solar system.

Adorned with thousands of beautiful ringlets, Saturn is unique among the planets. It is not the only planet to have rings—made of chunks of ice and rock—but none are as spectacular or as complicated as Saturn's.

Like fellow gas giant Jupiter, Saturn is a massive ball made mostly of hydrogen and helium.

10 Need-to-Know Things About Saturn

1

A COLOSSAL PLANET

Nine Earths side by side would almost span Saturn’s diameter. That doesn’t include Saturn’s rings.

2

IN DIM LIGHT

Saturn is the sixth planet from our Sun (a star) and orbits at a distance of about 886 million miles (1.4 billion kilometers) from the Sun.

3

SHORT DAY, LONG YEAR

Saturn takes about 10.7 hours (no one knows precisely) to rotate on its axis once—a Saturn “day”—and 29 Earth years to orbit the sun.

4

GAS GIANT

Saturn is a gas-giant planet and therefore does not have a solid surface like Earth’s. But it might have a solid core somewhere in there.

5

HOT AIR

Saturn's atmosphere is made up mostly of hydrogen (H_2) and helium (He).

6

MINI SOLAR SYSTEM

Saturn has 53 known moons with an additional 29 moons awaiting confirmation of their discovery—that is a total of 82 moons.

7

GLORIOUS RINGS

Saturn has the most spectacular ring system, with seven rings and several gaps and divisions between them.

8

RARE DESTINATION

Few missions have visited Saturn: Pioneer 11 and Voyagers 1 and 2 flew by; But Cassini orbited Saturn 294 times from 2004 to 2017.

9

LIFELESS BEHEMOTH

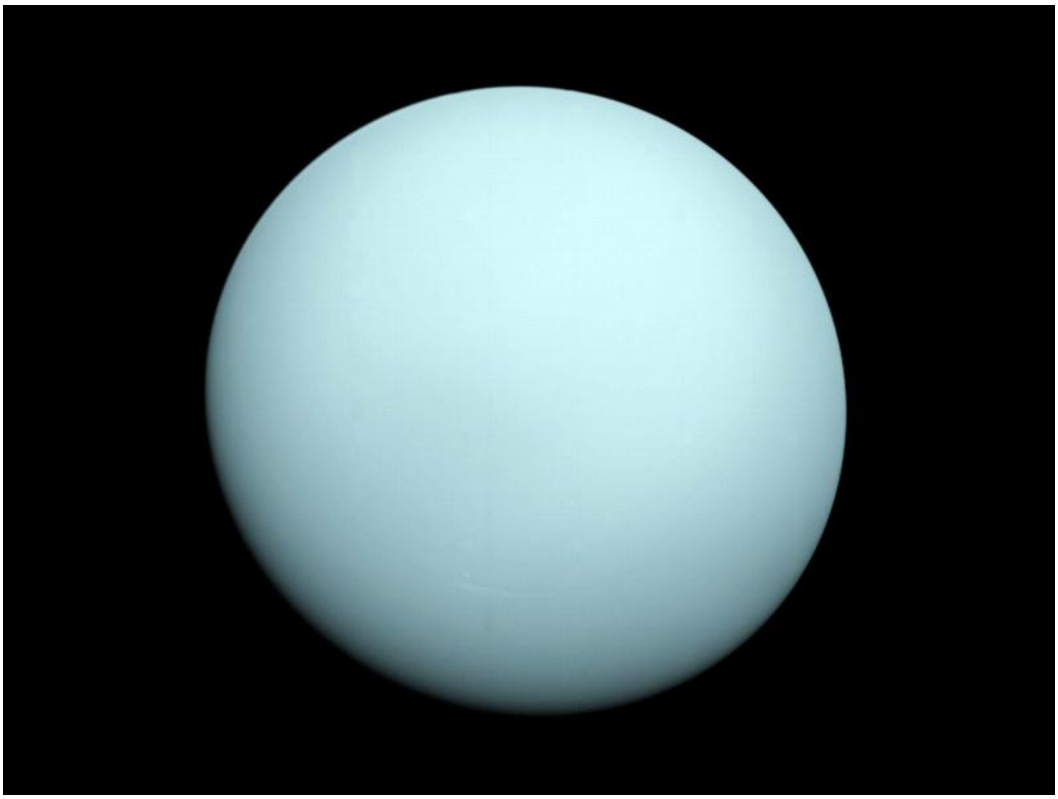
Saturn cannot support life as we know it, but some of Saturn's moons have conditions that might support life.

10

ADD A DASH OF EARTH

About two tons of Saturn’s mass came from Earth—the Cassini spacecraft was intentionally vaporized in Saturn’s atmosphere in 2017.

82 MOONS! THAT IS AMAZING, AND THERE IS A POSSIBILITY SOME COULD SUPPORT LIFE. INCREDIBLE. ONWARDS NOW TO OUR NEXT DESTINATION…URANUS THE SIDEWAYS PLANET.



Interesting Facts About Uranus

- Uranus is known as the “sideways planet” because it rotates on its side.
- Uranus was discovered in 1781 by William Herschel.
- Uranus was the first planet found using a telescope.
- Uranus is an Ice Giant planet and nearly four times larger than Earth.
- Uranus has 27 known moons, most of which are named after literary characters.
- Like Saturn, Jupiter and Neptune, Uranus is a ringed planet.

Uranus is made of water, methane, and ammonia fluids above a small rocky center. Its atmosphere is made of hydrogen and helium like Jupiter and Saturn, but it also has methane. The methane makes Uranus blue.

Uranus also has faint rings. The inner rings are narrow and dark. The outer rings are brightly coloured and easier to see. Like Venus, Uranus rotates in the opposite direction as most other planets. And unlike any other planet, Uranus rotates on its side.

Structure and Surface

- Uranus is surrounded by a set of 13 rings.
- Uranus is an ice giant (instead of a gas giant). It is mostly made of flowing icy materials above a solid core.
- Uranus has a thick atmosphere made of methane, hydrogen, and helium.
- Uranus is the only planet that spins on its side.
- Uranus spins the opposite direction as Earth and most other planets.

Time on Uranus

- One day on Uranus lasts a little over 17 hours (17 hours and 14 minutes, to be exact).

- One year on Uranus is the same as 84 years on Earth. That's a long time to wait for a birthday cake.

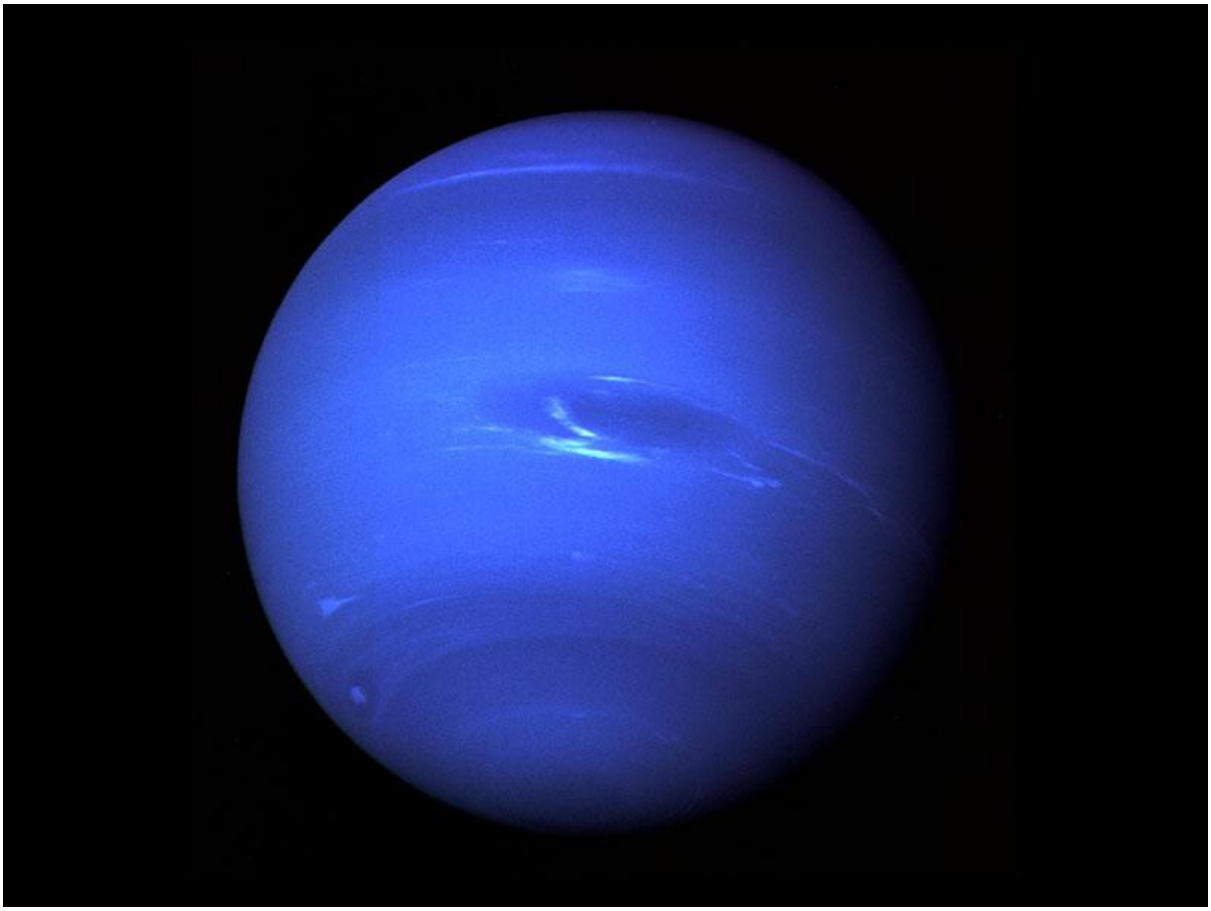
Uranus' Neighbors

- Uranus has 27 known moons.
- Uranus is the seventh planet from the Sun. That means Saturn and Neptune are Uranus' neighboring planets.

Quick History

- Uranus was discovered in 1781 by William Herschel in Great Britain.
- Uranus has only been visited by Voyager 2.

URANUS IS MAKING ME DIZZY, TIME TO MOVE ON I THINK. TIME TO HEAD TO OUR FINAL PLANET...NEPTUNE!



N E P T U N E M A Y S E E M like a serene sapphire world at first glance. But don't let its quiet azure hues fool you: The eighth planet from the sun is a wild child.

10 Need-to-Know Things About Neptune

1

GIANT

Neptune is about four times wider than Earth. If Earth were a large apple, Neptune would be the size of a basketball.

2

EIGHTH WANDERER

Neptune orbits our Sun, a star, and is the eighth planet from the Sun at a distance of about 2.8 billion miles (4.5 billion kilometers).

3

SHORT DAY, LONG YEAR

Neptune takes about 16 hours to rotate once (a Neptunian day), and about 165 Earth years to orbit the sun (a Neptunian year).

4

ICE GIANT

Neptune is an ice giant. Most of its mass is a hot, dense fluid of "icy" materials – water, methane and ammonia – above a small rocky core.

5

GASSY

Neptune's atmosphere is made up mostly of molecular hydrogen, atomic helium and methane.

6

MOONS

Neptune has 14 known moons which are named after sea gods and nymphs in Greek mythology.

7

FAINT RINGS

Neptune has at least five main rings and four more ring arcs, which are clumps of dust and debris likely formed by the gravity of a nearby moon.

8

ONE VOYAGE THERE

Voyager 2 is the only spacecraft to have visited Neptune. No spacecraft has orbited this distant planet to study it at length and up close.

9

LIFELESS

Neptune cannot support life as we know it.

10

ONE COOL FACT

Because of dwarf planet Pluto’s elliptical orbit, Pluto is sometimes closer to the Sun (and us) than Neptune is.

Did You Know?

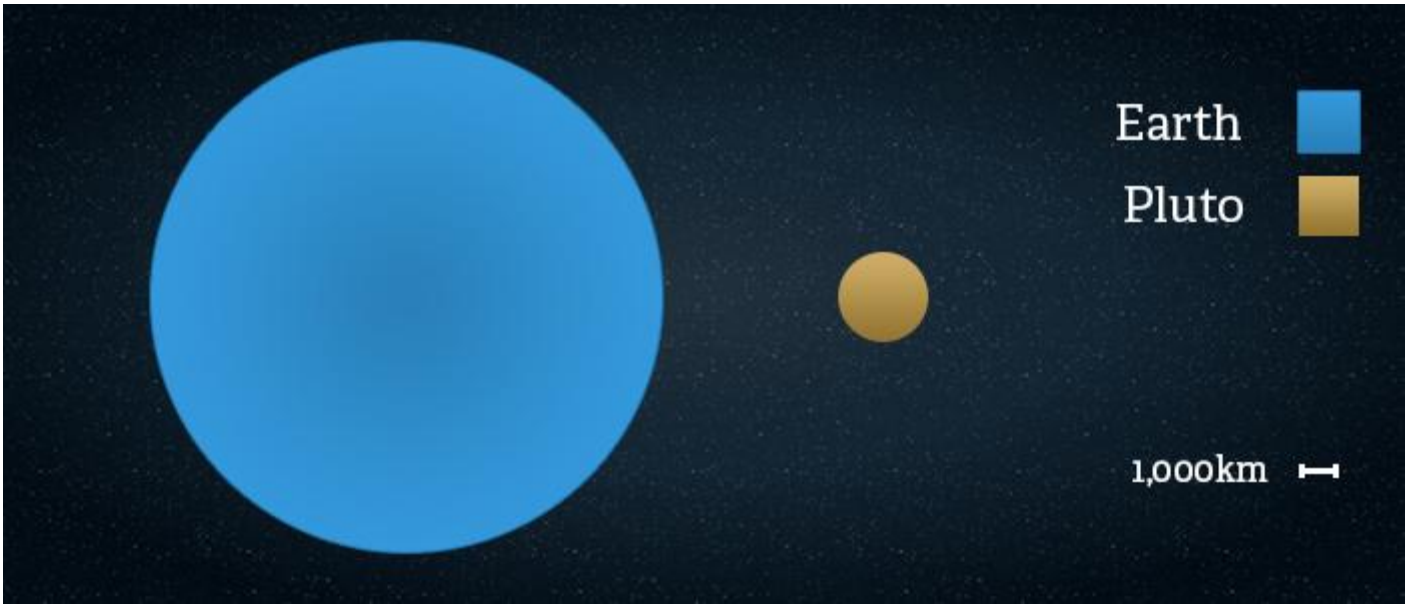
Neptune is our solar system's windiest world. Winds whip clouds of frozen methane across the planet at speeds of more than 2,000 km/h (1,200 mph)—close to the top speed of a U.S. Navy F/A-18 Hornet fighter jet. Earth's most powerful winds hit only about 400 km/h (250 mph).

THERE ARE MANY MORE OBJECTS IN OUR SOLAR SYSTEM SUCH AS DWARF PLANETS. PLUTO IS NOW CONSIDERED TO BE A DWARF PLANET, BUT IT IS STILL BEING DEBATED…

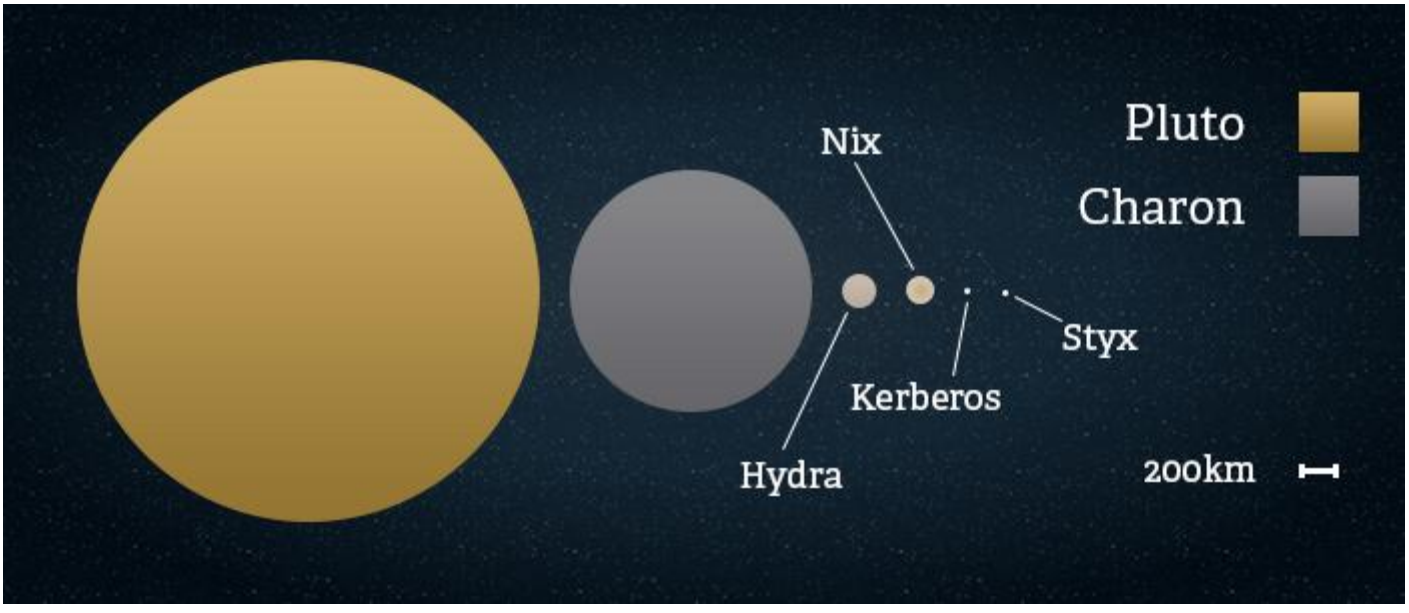
PLUTO FACTS

Pluto is the second closest dwarf planet to the Sun and from 1930 when it was discovered up until 2006, it was also considered the ninth planet of the solar system. It is also the second largest dwarf planet, with Eris being the most massive known dwarf planet.

SIZE OF PLUTO COMPARED TO THE EARTH



THE MOONS OF PLUTO

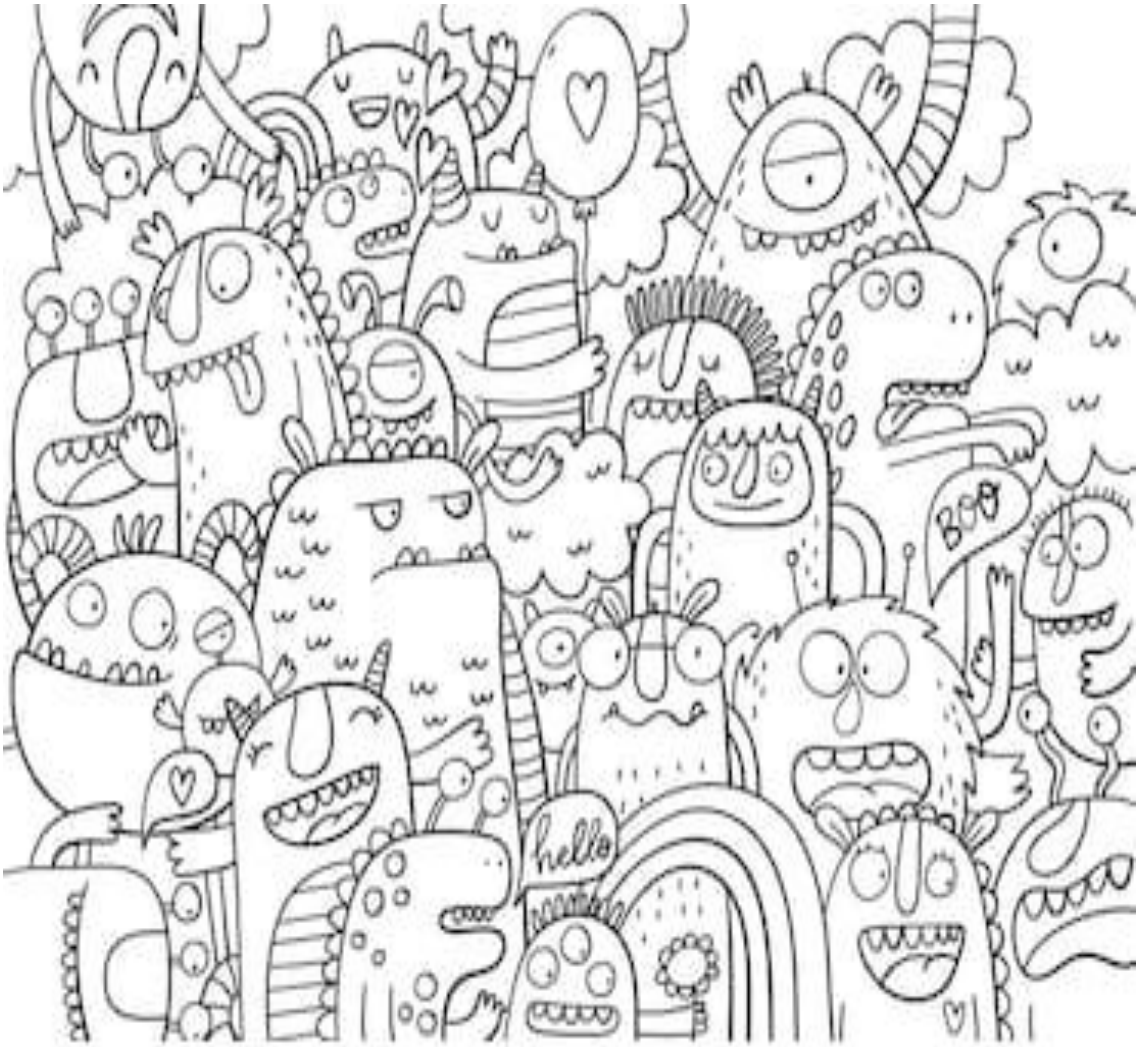


Pluto has 5 known moons. In order of distance from Pluto, these are Charon, Styx, Nix, Kerberos and

Hydra. Charon is the largest of the moons and mutually tidally locked with Pluto. This is a gravitational lock that makes one side of an astronomical body always face the another – for example how the same side of the Moon always faces Earth. Charon hovers over the same spot on Pluto – and the same side of Charon always faces Pluto.

Charon is also so large that Pluto-Charon are sometimes considered a double object, a double dwarf planet or a binary system.

PHEW I AM HEADING BACK TO EARTH… NOWHERE ELSE IN OUR SOLAR SYSTEM IS ANYWHERE NEAR AS COMFORTABLE! OF COURSE WITH THE UNIVERSE BEING SO MIND BOGGLINGLY BIG THERE IS A CHANCE THERE ARE PLANETS WE COULD LIVE ON SOMEWHERE….BUT THEY COULD ALREADY BE TAKEN.

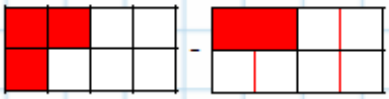


Subtracting Fractions

Step 1

Convert both fractions to the same denominator by finding equivalent fractions.

$^{3}/_{8}$ - $^{1}/_{4}$ (x2) = $^{3}/_{8}$ - $^{2}/_{8}$



Step 2

Subtract the numerators, ***but not the denominators.***

$^{3}/_{8}$ - $^{2}/_{8}$ = $^{1}/_{8}$

Step 3

Simplify the answer if you can.

$^{1}/_{8}$ cannot be simplified as it is a unit fraction (numerator of 1).

However:

$^{2}/_{6}$ the example answer can be simplified.

$^{2}/_{6}$ (÷2) = $^{1}/_{3}$

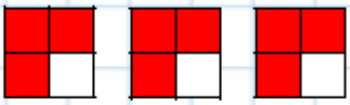
	Convert Question to Same Denominator	Answer
$^{5}/_{6} - {}^{1}/_{2} =$	(x3) $^{5}/_{6} - {}^{3}/_{6} = {}^{2}/_{6}$	$= {}^{1}/_{3}$
$^{6}/_{8} - {}^{1}/_{2} =$		
$^{1}/_{2} - {}^{1}/_{6} =$		
$^{9}/_{16} - {}^{1}/_{4} =$		
$^{2}/_{5} - {}^{3}/_{10} =$		
$^{3}/_{8} - {}^{5}/_{24} =$		
$^{6}/_{7} - {}^{5}/_{14} =$		
$^{3}/_{4} - {}^{5}/_{12} =$		
$^{2}/_{3} - {}^{4}/_{9} =$		
$^{7}/_{8} - {}^{1}/_{2} =$		
$^{5}/_{6} - {}^{1}/_{5} =$		
$^{1}/_{3} - {}^{1}/_{4} =$		
$^{2}/_{5} - {}^{1}/_{8} =$		

Multiplying Fractions by Whole Numbers

Step 1

Multiplying means doing the same thing a certain amount of times. If I have $^{3}/_{4}$ and multiply it by 3, that means I need $^{3}/_{4}$, 3 times.

$^{3}/_{4}$ x 3 = $^{9}/_{4}$



Step 2

Multiply the numerator by the whole number.
3 x 3 = 9 so 9 is our answers numerator.

$^{3}/_{4}$ x 3 = $^{9}/_{4}$

Step 3

Convert into a mixed number where necessary by using your denominator to help you work out how many wholes you have.

$^{9}/_{4}$

9 (numerator) ÷ 4 (denominator) = 2 r 1

...so our answer is $2\ ^{1}/_{4}$

	Answer as an Improper Fraction	Answer as a Mixed Number
$^{3}/_{4} \times 3$	$^{9}/_{4}$	$2\ ^{1}/_{4}$
$^{1}/_{7} \times 5$		
$^{2}/_{5} \times 6$		
$^{2}/_{10} \times 9$		
$^{5}/_{7} \times 3$		
$^{5}/_{8} \times 2$		
$^{7}/_{12} \times 8$		
$^{4}/_{5} \times 4$		
$^{9}/_{11} \times 7$		
$^{6}/_{7} \times 12$		
$^{1}/_{2} \times 5$		
$^{3}/_{8} \times 7$		
$^{8}/_{9} \times 4$		

Rounding Decimals to the Nearest Whole Number

Tens	Units	.	Tenths	Hundredths	Thousandths
1	4	.	2	0	8

Step 1

As we're rounding to the nearest whole number, we need to underline the units column and circle the tenths.

Step 2

If the tenths (circled number) is 5 or more, add one more to the underlined digit. If it's 4 or less, leave it as it is.

Step 3

For your answer, just write the units – you don't need anything after the decimal point.

5 . (3) 4 = 5

Less than 5 so we leave the units as they are.

5 . (6) 7 8 = 6

More than 5 so we add 1 to the units making 6.

Number	Rounded to the Nearest Whole Number
2.7	
6.28	
9.831	
14.3	
67.57	
80.04	
35.921	
421.6	
142.12	
371.823	
4.289	
99.72	
802.008	
129.7	

Ordering Decimals

Step 1

Place all your numbers in a column, with all the digits aligned correctly and then check whether you're placing them in ascending or descending order.

4 • 3 6

3 • 6 4

3 • 4 6

Step 2

Compare the digits starting from the left, if they're the same value look at the next column until you find a difference.

4 is larger than 3 so 4.36 is larger than 3.64.

4 • 3 6

3 • 6 4

3 • 4 6

Both digits are the same so we look at the tenths.

6 tenths are bigger than 4 tenths, so 3.64 is bigger than

Ascending Order

3.46, 3.64, 4.36

Descending Order

4.36, 3.64, 3.46

Put the following numbers in **ascending order**

4.56	4.65	6.54	5.46
15.2	1.52	2.51	5.21
1.243	1.423	1.432	1.234

Put the following numbers in **descending order**

8.29	8.291	8.912	8.2
6.57	5.76	57.6	56.7
2.01	0.12	10.2	0.21

Comparing Decimals

smaller than	larger than	equal to
<	>	=

Step 1

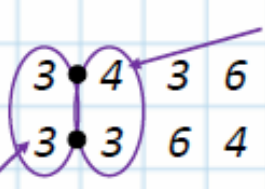
Place your numbers in a column, with all the digits aligned correctly.

3 • 4 3 6

3 • 3 6 4

Step 2

Compare the digits starting from the left, if they're the same value look at the next column until you find a difference.



4 tenths is larger than 3 tenths so 3.436 is larger than 3.364.

Both digits are the same so we look at the tenths.

Step 3

Choose the correct symbol for the numbers.

3.436 > 3.364

"3.436 is larger than 3.364."

Use >, < or = to compare these numbers.

4.564		4.654
1.2		1
65.1		65.17
0.123		0.3
5.678		5.688
46.894		48.849
6.03		6.03
4.12		4.21
10.6		10.25
9.06		9.6

Percentages as Fractions & Decimals

Step 1

Percentages are shown by using the symbol % and 'per cent' means 'out of 100.'

So if we have 67% this means 67 out of 100.

Step 2

If we know that it's out of 100, we can place this as our denominator, as this tells us how many make a whole.

$/_{100}$

Step 3

The number of our percentage tells us how many of that 100 we are counting, so that becomes the numerator, which gives us our fraction.

$^{67}/_{100}$

Step 4

Once we have our fraction we can convert it into our decimal. As we're working with hundredths this is 2 places away from our decimal point. This means the last number of our numerator (the 7) goes in our hundredths, and the first number (the 6) will go in our tenths.

$^{67}/_{100}$

Units	•	$^{1}/_{10}$ Tenths	$^{1}/_{100}$ Hundredths
0	•	6	7

Percentage	Fraction	Decimal
67%	$^{67}/_{100}$	0.67
32%		
7%		
18%		
91%		
50%		
31%		
80%		
3%		
100%		
26%		
47%		
99%		

Converting Metric Measures

Units of Length	Units of Mass	Units of Capacity
10 mm = 1 cm 100 cm = 1 m 1000 m = 1 km	1000 g = 1 kg	1000 ml = 1 l

Step 1

Write out the measurements that you need, thinking of how many go into 1 of the other. For example, if converting cm to metres, we need to know how many cm are in a m.

100 cm = 1 m

Step 2

Add arrows showing how you get to each value from the other.

X 100

100 cm = 1 m

÷ 100

Step 3

You can then use these calculations to work out your answer.

What is 3708 cm in m?

To get from cm to m we need to ÷ 100 so we need to divide 3708 by 100.

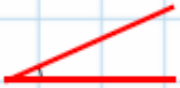
3708 cm = 37.08 m

Question	Answer
What is 3 l in ml?	
What is 4500 g in kg?	
What is 3.4 km in m?	
What is 67 cm in mm?	
What is 380 ml in l?	
What is 2.78 kg in g?	
What is 14 m in cm?	
What is 7 mm in cm?	
What is 15.6 l in ml?	
What is 837 g in kg?	
What is 1.2 m in mm?	
What is 63,000 cm in km?	
What is 2 g in kg?	

Obtuse, Acute & Reflex Angles

Step 1

An acute angle is an angle between 0° and 89°. It is smaller than a right angle.



Step 2

A right angle is an angle that is exactly 90° and is marked by a square.

Step 3

An obtuse angle is an angle between 91° and 179°. It is bigger than a right angle but smaller than a straight line angle.

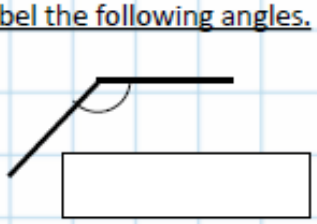
Step 4

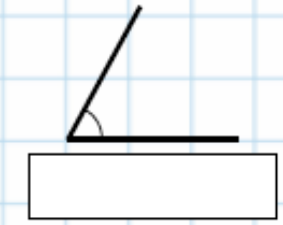
A straight line angle is exactly 180°.

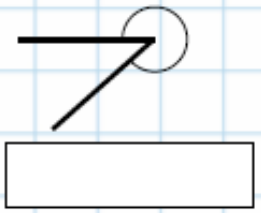
Step 5

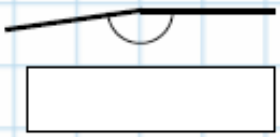
A reflex angle is an angle between 181° and 359°. It is bigger than a straight line angle but smaller than a full turn (360°).

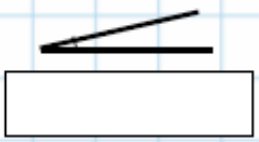
Label the following angles.

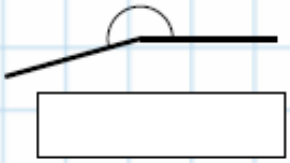


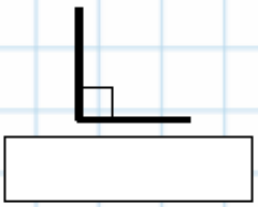


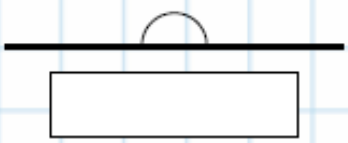












Year 5
Arithmetic practice test 8

Name:_____
Date:_____

1	4764 + 100			1
2	8964– 66			1
3	72 = 25 + __			1
4	__ - 15 = 57			1
5	60 x 70			1
6	$\frac{3}{10} + \frac{5}{10}$			1
7	0.9 ÷ 1000			1
8	8^2			1
9	0.2 + 0.6			1

10	483 x 3			1
11	1925 ÷ 5			1
12	0.1– 0.08			1
13	$\frac{8}{10} - \frac{4}{10}$			1
14	333 x 50			2
15	265 x 66			2
16	$\frac{2}{3} - \frac{1}{4}$			1
17	4.4 x 4.6			1
18	769,368-480,414			1

19	257,192+414,893			1
20	17– 0.19			1
21	96 x 654			2
22	$\frac{1}{5}$ x 6			1
23	1830 x 5			1
24	468 ÷ 9			1
25	$9\frac{5}{6}$ x 5			1
26	5900 cm in m			1
27	50% of 66			1

28	672 x 42			2
29	39.51 x 10			1
30	$\frac{1}{8}$ of 56			1
31	72 + 10			1
32	573,281—1,000			1
33	$\frac{1}{2} + \frac{1}{4}$			1
34	$\frac{2}{10}$ of ___is 48			1
35	___ ÷26 = 20			1
36	12 = 4 x __			

Things to work on for next time:

Year 5
Arithmetic practice test 9

Name:_____
Date:_____

1	4631 + 150			1
2	8289-482			1
3	122 = 35 + __			1
4	68 - __ = 9			1
5	200 x 30			1
6	$\frac{4}{12} + \frac{4}{12}$			1
7	4.2 ÷ 100			1
8	9^2			1
9	0.2 + 0.7			1

10	695 x 2			1
11	3120 ÷ 8			1
12	0.15– 0.02			1
13	$\frac{9}{12} - \frac{8}{12}$			1
14	139 x 80			2
15	731 x 84			2
16	$\frac{2}{3} - \frac{4}{10}$			1
17	3.8 x 4.8			1
18	972,932-537,863			1

19	8,432.935+4,173,398			1
20	8– 0.07			1
21	85 x 452			2
22	$\frac{2}{3}$ x 2			1
23	2127 x 7			1
24	837 ÷ 9			1
25	$2\frac{1}{6}$ x 3			1
26	1450 cm in m			1
27	50% of 884			1

28	551 x 73			2
29	50.44 x 10			1
30	$\frac{3}{4}$ of 24			1
31	344 + 10			1
32	563,281—100,000			1
33	$\frac{1}{2} + \frac{3}{10}$			1
34	$\frac{2}{6}$ of ___is 28			1
35	__ ÷19 = 23			1
36	4 x __ = 60			1

Things to work on for next time:

Year 5
Arithmetic practice test 10

Name:_____
Date:_____

1	7821 + 145			1
2	8493-294			1
3	92 = 37 + ___			1
4	___ - 18 = 26			1
5	80 x30			1
6	$\frac{1}{4} + \frac{1}{4}$			1
7	895 ÷ 1000			1
8	10^2			1
9	0.7 + 0.1			1

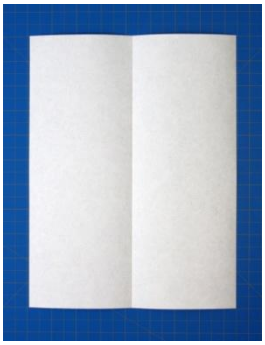
10	481 x 4			1
11	6904 ÷ 8			1
12	0.17– 0.04			1
13	$\frac{3}{7} - \frac{1}{7}$			1
14	645 x 50			2
15	162 x 26			2
16	$\frac{7}{10} - \frac{1}{4}$			1
17	2.3 x 6			1
18	722,280-160,731			1

19	83,149+90,235			1
20	15– 1.3			1
21	5632 x 23			2
22	$\frac{3}{5}$ x 6			1
23	1491 x 6			1
24	8712 ÷ 9			1
25	$8\frac{1}{2}$ x 3			1
26	64.71 m in cm			1
27	25% of 108			1

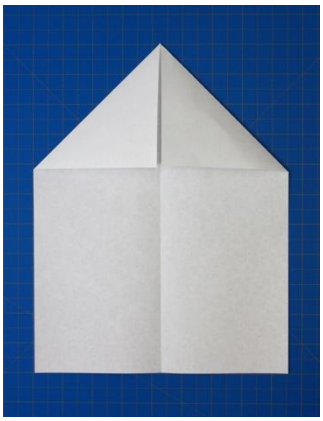
28	938 x 66			2
29	14.43 x 100			1
30	$\frac{2}{7}$ of 28			1
31	494 + 10			1
32	764,384—10,000			1
33	$\frac{2}{3} + \frac{1}{10}$			1
34	$\frac{3}{4}$ of ___is 54			1
35	___ ÷15 = 18			1
36	__ x 12 = 120			1

Things to work on for next time:

Plane 1



1. Fold the paper in half.

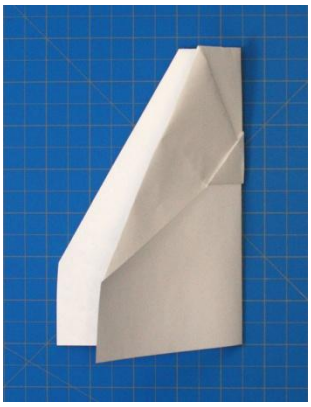


2. Unfold and then fold the top two corners to the center line.

3. Fold the top peak down to create a square.

4. Fold the top two corners to the center about an inch above the downward facing point, to form a triangle shape on top and a diamond shape on bottom.

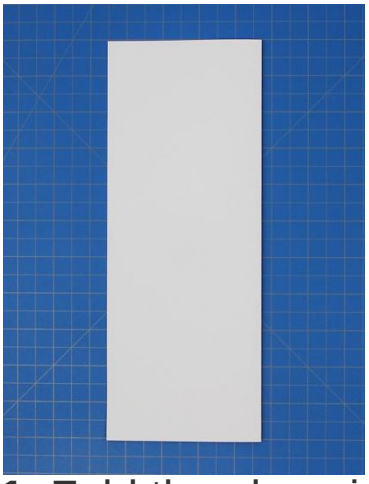
5. Fold the downward facing point up to secure the flaps.



6. Fold the plane in half away from you and flatten it out.

7. Fold the edges down to create the wide wings.

Plane 2

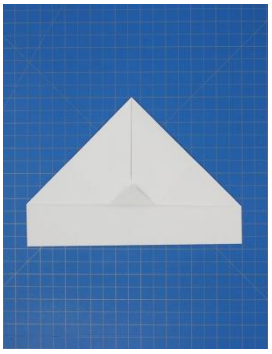


1. Fold the plane in half and open it back up.

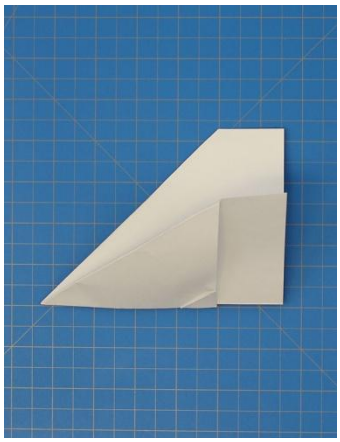
2. Fold both corners in along the center line.

3. Fold the peak down about 3/4 inch before the bottom edge.

4. Again, fold both corner in along the center line.



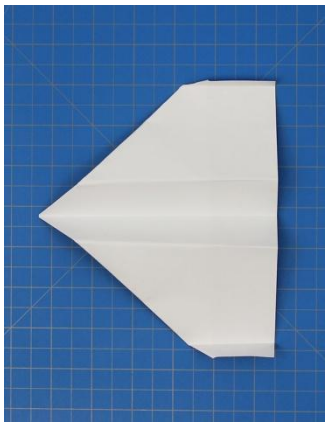
5. Take the extra piece at the bottom and fold it up to lock down the two flaps.



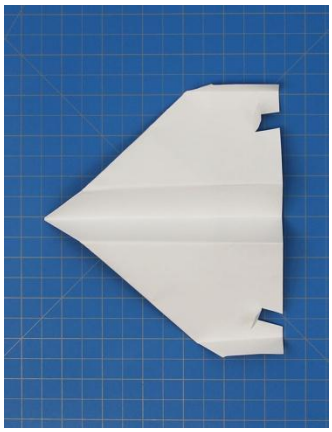
6. Now, fold the plane in half away from you.

7. Fold one wing down about one inch from the belly of the plane.

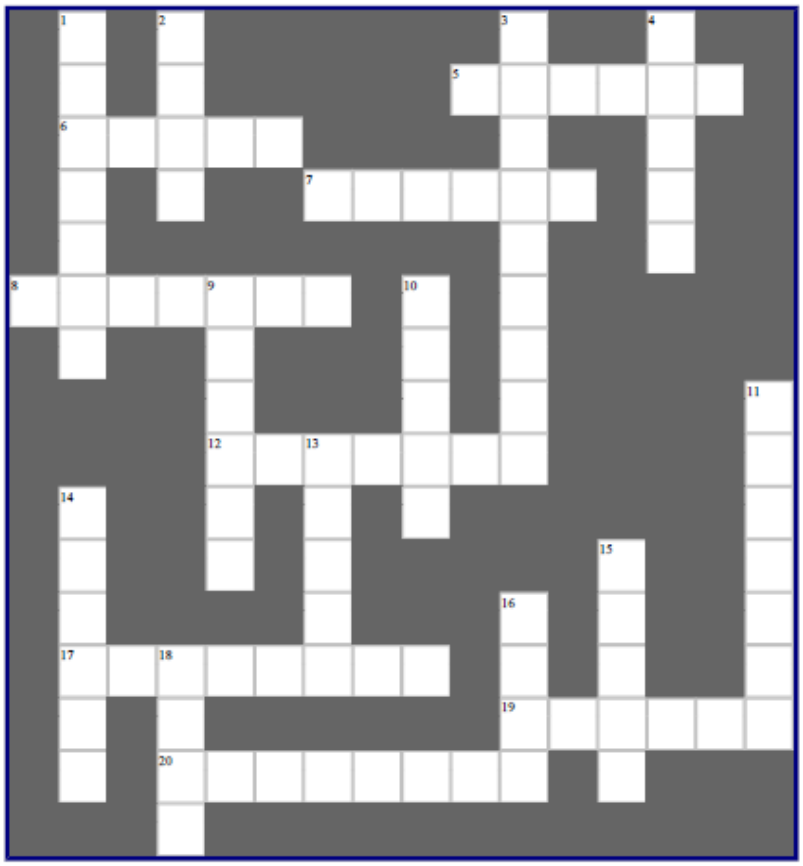
8. Repeat with the other wing.



9. Next, fold up the ends of each wing about a half inch.



10. Finally, take a pair of scissors and cut two small slits at the tail end of each wing.



Across

5. A gassy planet with a spectacular ring system. (6)
6. Appearance of a moon or planet - full, new or crescent for example. (5)
7. This orbits a star and reflects the star's light. (6)
8. Planet nearest the Sun. (7)
12. A blue planet, outermost of the gassy planets in our solar system. (7)
17. A small lump of rock or metal that moves around the Sun, mainly between Mars and Jupiter. (8)
19. Spin on its axis. (6)
20. This means that something gives out light. (8)

Down

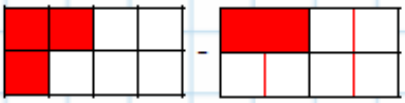
1. Huge gassy planet with a giant red spot. (7)
2. A huge ball of gas that emits light. Our Sun is one. (4)
3. This orbits a planet, our moon is one. (9)
4. The path of a planet around the Sun, or a satellite around a planet. (5)
9. Third largest planet in our solar system, seventh furthest from the Sun. (6)
10. Hot planet with acidic clouds, second closest to the Sun. (5)
11. When the moon casts a shadow on the Earth. (7)
13. Planet usually furthest from the Sun. (5)
14. A group of millions of stars. (6)
15. Our home, the third planet from the Sun. (5)
16. Red planet with canyons, volcanoes and polar ice caps. (4)
18. How much a line departs from the vertical. (4)

Subtracting Fractions Answers

Step 1

Convert both fractions to the same denominator by finding equivalent fractions.

$^{3}/_{8}$ - $^{1}/_{4}$ (x2) = $^{3}/_{8}$ - $^{2}/_{8}$



Step 2

Subtract the numerators, ***but not the denominators.***

$^{3}/_{8}$ - $^{2}/_{8}$ = $^{1}/_{8}$

Step 3

Simplify the answer if you can.

$^{1}/_{8}$ cannot be simplified as it is a unit fraction (numerator of 1).

However:

$^{2}/_{6}$ the example answer can be simplified.

$^{2}/_{6}$ (÷2) = $^{1}/_{3}$

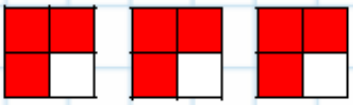
	Answer	Simplified
$^{5}/_{6} - {}^{1}/_{2} =$	(x3) $^{5}/_{6} - {}^{3}/_{6} = {}^{2}/_{6}$	$= {}^{1}/_{3}$
$^{6}/_{8} - {}^{1}/_{2} =$	$= {}^{2}/_{8}$	$= {}^{1}/_{4}$
$^{1}/_{2} - {}^{1}/_{6} =$	$= {}^{2}/_{6}$	$= {}^{1}/_{3}$
$^{9}/_{16} - {}^{1}/_{4} =$	$= {}^{5}/_{16}$	
$^{2}/_{5} - {}^{3}/_{10} =$	$= {}^{1}/_{10}$	
$^{3}/_{8} - {}^{5}/_{24} =$	$= {}^{4}/_{24}$	$= {}^{1}/_{6}$
$^{6}/_{7} - {}^{5}/_{14} =$	$= {}^{7}/_{14}$	$= {}^{1}/_{2}$
$^{3}/_{4} - {}^{5}/_{12} =$	$= {}^{4}/_{12}$	$= {}^{1}/_{3}$
$^{2}/_{3} - {}^{4}/_{9} =$	$= {}^{2}/_{9}$	
$^{7}/_{8} - {}^{1}/_{2} =$	$= {}^{3}/_{8}$	
$^{5}/_{6} - {}^{1}/_{5} =$	$= {}^{19}/_{30}$	
$^{1}/_{3} - {}^{1}/_{4} =$	$= {}^{1}/_{12}$	
$^{2}/_{5} - {}^{1}/_{8} =$	$= {}^{11}/_{40}$	

Multiplying Fractions by Whole Numbers Answers

Step 1

Multiplying means doing the same thing a certain amount of times. If I have $^{3}/_{4}$ and multiply it by 3, that means I need $^{3}/_{4}$, 3 times.

$^{3}/_{4}$ x 3 = $^{9}/_{4}$



Step 2

Multiply the numerator by the whole number.
3 x 3 = 9 so 9 is our answers numerator.

$^{3}/_{4}$ x 3 = $^{9}/_{4}$

Step 3

Convert into a mixed number where necessary by using your denominator to help you work out how many wholes you have.

$^{9}/_{4}$

9 (numerator) ÷ 4 (denominator) = 2 r 1

...so our answer is $2\ ^{1}/_{4}$

	Answer as an Improper Fraction	Answer as a Mixed Number
$^{3}/_{4} \times 3$	$^{9}/_{4}$	$2\ ^{1}/_{4}$
$^{1}/_{7} \times 5$	$^{5}/_{7}$	
$^{2}/_{5} \times 6$	$^{12}/_{5}$	$2\ ^{2}/_{5}$
$^{2}/_{10} \times 9$	$^{18}/_{10}$	$1\ ^{8}/_{10}$ *or* $1\ ^{4}/_{5}$
$^{5}/_{7} \times 3$	$^{15}/_{7}$	$2\ ^{1}/_{7}$
$^{5}/_{8} \times 2$	$^{10}/_{8}$	$1\ ^{2}/_{8}$ *or* $1\ ^{1}/_{4}$
$^{7}/_{12} \times 8$	$^{56}/_{12}$	$4\ ^{8}/_{12}$ *or* $4\ ^{2}/_{3}$
$^{4}/_{5} \times 4$	$^{16}/_{5}$	$3\ ^{1}/_{5}$
$^{9}/_{11} \times 7$	$^{63}/_{11}$	$5\ ^{8}/_{11}$
$^{6}/_{7} \times 12$	$^{72}/_{7}$	$10\ ^{2}/_{7}$
$^{1}/_{2} \times 5$	$^{5}/_{2}$	$2\ ^{1}/_{2}$
$^{3}/_{8} \times 7$	$^{21}/_{8}$	$2\ ^{5}/_{8}$
$^{8}/_{9} \times 4$	$^{32}/_{9}$	$3\ ^{5}/_{9}$

Rounding Decimals to the Nearest Whole Number

Tens	Units	.	Tenths	Hundredths	Thousandths
1	4	.	2	0	8

Step 1

As we're rounding to the nearest whole number, we need to underline the units column and circle the tenths.

Step 2

If the tenths (circled number) is 5 or more, add one more to the underlined digit. If it's 4 or less, leave it as it is.

Step 3

For your answer, just write the units – you don't need anything after the decimal point.

5 . (3) 4 = 5

Less than 5 so we leave the units as they are.

5 . (6) 7 8 = 6

More than 5 so we add 1 to the units making 6.

Number	Rounded to the Nearest Whole Number
2.7	
6.28	
9.831	
14.3	
67.57	
80.04	
35.921	
421.6	
142.12	
371.823	
4.289	
99.72	
802.008	
129.7	

Ordering Decimals

Step 1

Place all your numbers in a column, with all the digits aligned correctly and then check whether you're placing them in ascending or descending order.

4 • 3 6
3 • 6 4
3 • 4 6

Step 2

Compare the digits starting from the left, if they're the same value look at the next column until you find a difference.

4 is larger than 3 so 4.36 is larger than 3.64.

4 • 3 6
3 • 6 4
3 • 4 6

Both digits are the same so we look at the tenths.

6 tenths are bigger than 4 tenths, so 3.64 is bigger than 3.46

Ascending Order
3.46, 3.64, 4.36

Descending Order
4.36, 3.64, 3.46

Put the following numbers in **ascending order**

4.56	4.65	6.54	5.46
15.2	1.52	2.51	5.21
1.243	1.423	1.432	1.234

Put the following numbers in **descending order**

8.29	8.291	8.912	8.2
6.57	5.76	57.6	56.7
2.01	0.12	10.2	0.21

Comparing Decimals

smaller than	larger than	equal to
<	>	=

Step 1

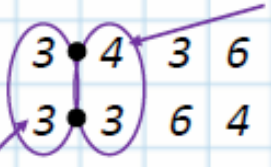
Place your numbers in a column, with all the digits aligned correctly.

3 • 4 3 6

3 • 3 6 4

Step 2

Compare the digits starting from the left, if they're the same value look at the next column until you find a difference.



4 tenths is larger than 3 tenths so 3.436 is larger than 3.364.

Both digits are the same so we look at the tenths.

Step 3

Choose the correct symbol for the numbers.

3.436 > 3.364

"3.436 is larger than 3.364."

Use >, < or = to compare these numbers.

4.564		4.654
1.2		1
65.1		65.17
0.123		0.3
5.678		5.688
46.894		48.849
6.03		6.03
4.12		4.21
10.6		10.25
9.06		9.6

Percentages as Fractions & Decimals Answers

Step 1

Percentages are shown by using the symbol % and 'per cent' means 'out of 100.'

So if we have 67% this means 67 out of 100.

Step 2

If we know that it's out of 100, we can place this as our denominator, as this tells us how many make a whole.

$/_{100}$

Step 3

The number of our percentage tells us how many of that 100 we are counting, so that becomes the numerator, which gives us our fraction.

$^{67}/_{100}$

Step 4

Once we have our fraction we can convert it into our decimal. As we're working with hundredths this is 2 places away from our decimal point. This means the last number of our numerator (the 7) goes in our hundredths, and the first number (the 6) will go in our tenths.

$^{67}/_{100}$

Units	•	$^{1}/_{10}$ Tenths	$^{1}/_{100}$ Hundredths
0	•	6	7

Percentage	Fraction	Decimal
67%	$^{67}/_{100}$	0.67
32%	$^{32}/_{100}$	0.32
7%	$^{7}/_{100}$	0.07
18%	$^{18}/_{100}$	0.18
91%	$^{91}/_{100}$	0.91
50%	$^{50}/_{100}$	0.5
31%	$^{31}/_{100}$	0.31
80%	$^{80}/_{100}$	0.8
3%	$^{3}/_{100}$	0.03
100%	$^{100}/_{100}$	1
26%	$^{26}/_{100}$	0.26
47%	$^{47}/_{100}$	0.47
99%	$^{99}/_{100}$	0.99

Converting Metric Measures Answers

Units of Length	Units of Mass	Units of Capacity
10 mm = 1 cm 100 cm = 1 m 1000 m = 1 km	1000 g = 1 kg	1000 ml = 1 l

Step 1

Write out the measurements that you need, thinking of how many go into 1 of the other. For example, if converting cm to metres, we need to know how many cm are in a m.

100 cm = 1 m

Step 2

Add arrows showing how you get to each value from the other.

X 100

100 cm = 1 m

÷ 100

Step 3

You can then use these calculations to work out your answer.

What is 3708 cm in m?

To get from cm to m we need to ÷ 100 so we need to divide 3708 by 100.

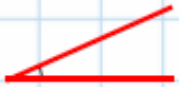
3708 cm = 37.08 m

Question	Answer
What is 3 l in ml?	3000 ml
What is 4500 g in kg?	4.5 kg
What is 3.4 km in m?	3400 m
What is 67 cm in mm?	670 mm
What is 380 ml in l?	0.38 l
What is 2.78 kg in g?	2780 g
What is 14 m in cm?	1400 cm
What is 7 mm in cm?	0.7 cm
What is 15.6 l in ml?	15,600 ml
What is 837 g in kg?	0.837 kg
What is 1.2 m in mm?	1200 mm
What is 63,000 cm in km?	0.63 km
What is 2 g in kg?	0.002 kg

Obtuse, Acute & Reflex Angles Answers

Step 1

An acute angle is an angle between 0° and 89°. It is smaller than a right angle.



Step 2

A right angle is an angle that is exactly 90° and is marked by a square.

Step 3

An obtuse angle is an angle between 91° and 179°. It is bigger than a right angle but smaller than a straight line angle.

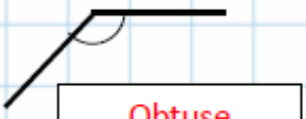
Step 4

A straight line angle is exactly 180°.

Step 5

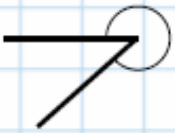
A reflex angle is an angle between 181° and 359°. It is bigger than a straight line angle but smaller than a full turn (360°).

Label the following angles.



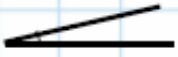
Obtuse

Acute



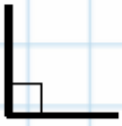
Reflex

Obtuse



Acute

Reflex



Right Angle

Straight Line

Year 5
Arithmetic practice test 8
answers

1	4864	10	1449	19	672085	28	28, 224
2	8898	11	385	20	16.81	29	395.1
3	47	12	0.02	21	62,784	30	7
4	72	13	4/10	22	6/5 1 1/5	31	82
5	4200	14	16,650	23	9150	32	572,281
6	8/10 4/5	15	17,490	24	52	33	3/4
7	0.0009	16	5/12	25	49 1/6	34	240
8	64	17	20.24	26	59 m	35	520
9	0.8	18	288954	27	33	36	3

Year 5
Arithmetic practice test 9
answers

1	**4,781**	10	**1390**	19	**12606333**	28	**40, 223**
2	7,807	11	390	20	7.93	29	504.4
3	87	12	0.13	21	38,420	30	18
4	59	13	1/12	22	4/3 1 1/3	31	354
5	6000	14	11,120	23	14,889	32	463,281
6	8/12 or 2/3	15	61,404	24	93	33	8/10 4/5
7	0.042	16	8/30 4/15	25	6 3/6	34	84
8	81	17	18.24	26	14.5 m	35	437
9	0.9	18	435069	27	442	36	15

Year 5
Arithmetic practice test 10
answers

1	7,966	10	1924	19	173384	28	61, 908
2	8199	11	863	20	13.7	29	1443
3	55	12	0.13	21	129,536	30	8
4	44	13	2/7	22	18/5 3 3/5	31	504
5	2400	14	32.250	23	8946	32	754,381
6	2/4 or /2	15	4,212	24	968	33	23/30
7	0.895	16	9/20	25	25 ½	34	72
8	100	17	13.8	26	6471 cm	35	270
9	0.8	18	561549	27	27	36	10