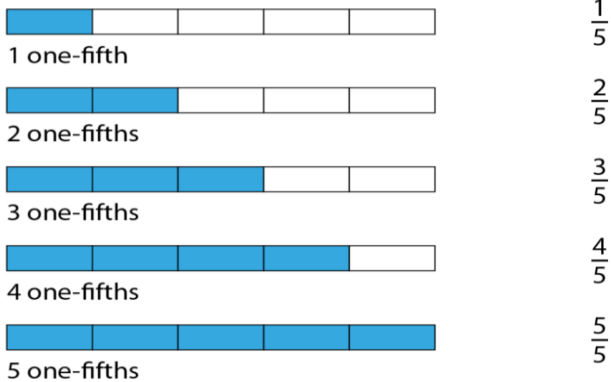


Maths Week Thirteen

Mixed bag: This week we are finishing off fractions with just two days of work finding equivalent fractions and fractions of quantities and then moving on to Shape and Geometry



• 'We have split our whole into five equal parts, so our unit fraction is one-fifth.'

Shading	Fraction	Decimal	Hundredths
	$\frac{1}{10}$	0.1	$\frac{10}{100}$
	$\frac{3}{10}$	0.	$\frac{30}{100}$
	$\frac{7}{10}$	0.	$\frac{70}{100}$
	$\frac{1}{10}$	0.	$\frac{10}{100}$
	$\frac{3}{10}$	0.	$\frac{30}{100}$
	$\frac{8}{10}$	0.8	$\frac{80}{100}$
	$\frac{1}{2}$	0.	$\frac{50}{100}$
	1	0.	$\frac{100}{100}$
	$\frac{3}{4}$	0.	$\frac{75}{100}$
	$\frac{1}{5}$	0.	$\frac{20}{100}$
	$\frac{3}{5}$	0.6	$\frac{60}{100}$
	$\frac{1}{5}$	0.	$\frac{20}{100}$

Equivalent Fraction Pairs



The numbers above can be used to make two pairs of equivalent fractions. No number can be used more than once.

Example:

$$\frac{3}{4} = \frac{6}{8} \quad \frac{1}{2} = \frac{5}{10}$$

7 and 9 are not used.

- 1) (a) Find another way of making two pairs of equivalent fractions using the numbers 1 to 10.
- (b) Which numbers are not used?
- 2) (a) How many equivalent fraction pairs can you make using the numbers 1 to 20?



Remember that no number can be used more than once.

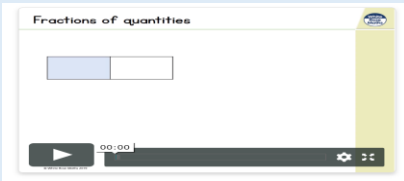
- (b) Which numbers are not used? Why?

Talk to an adult about these two activities. You may need a bit of help completing them but both will help you to embed what you have learned so far. Give them a go today or tomorrow.

Car Care had 9 customers today. $\frac{1}{3}$ of the customers came in for a change of oil. The rest came in for a wash and wax. How many customers came to the shop for a change of oil?

ANSWER: customers

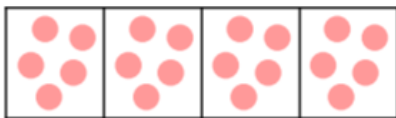
Visit [Thinking Blocks](https://www.thinkingblocks.com) to work through different examples



Click [here](#) for today's video reminder (same as last Friday)

Fractions of a Quantity

1a. Circle the number that is $\frac{1}{4}$ of the whole number represented below.



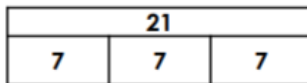
- 20
- 5
- 14



VF

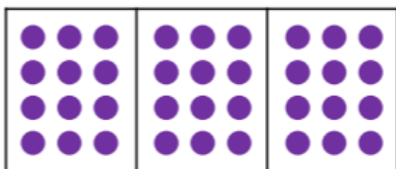
2a. Solve the calculation.

$\frac{1}{3}$ of 21 =



VF

3a. Find a third of thirty-six.



$\frac{1}{3}$ of 36 =



VF

4a. Use counters to match the calculation to the answer.

- A. $\frac{1}{10}$ of 80

8
- B. $\frac{1}{4}$ of 24

6
- C. $\frac{1}{3}$ of 15

8
- D. $\frac{1}{2}$ of 16

5



VF

5a. Circle the number that is $\frac{2}{3}$ of the whole number represented below.



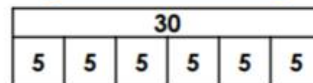
- 12
- 10
- 18



VF

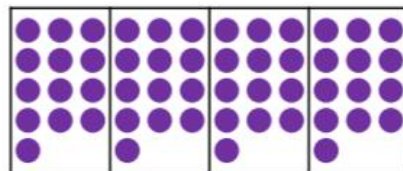
6a. Solve the calculation.

$\frac{5}{6}$ of 30 =



VF

7a. Find three quarters of fifty-two.



$\frac{3}{4}$ of 52 =



VF

8a. Use counters to match the calculation to the answer.

- A. $\frac{3}{5}$ of 35

63
- B. $\frac{9}{10}$ of 70

21
- C. $\frac{3}{7}$ of 56

45
- D. $\frac{5}{8}$ of 72

24



VF

Varied Fluency
Fractions of a Quantity

Developing

- 1a. 5
2a. 7
3a. 12
4a. A. 8; B. 6; C. 5; D. 8

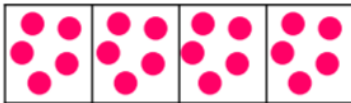
Expected

- 5a. 12
6a. 25
7a. 39
8a. A. 21; B. 63; C. 24; D. 45

Greater Depth

- 9a. 10
10a. 660
11a. If $\frac{1}{4}$ of 40 = 10, then $\frac{3}{4}$ of 80 = 60.
12a. A. 18; B. 30; C. 180; D. 20

9a. Circle the number that is $\frac{4}{8}$ of the whole number represented below.



- 20 40 10



VF

10a. Use the first calculation to solve the second.

$$\frac{6}{8} \text{ of } 44 = 33$$

$$\frac{6}{8} \text{ of } 880 = \square$$



VF

11a. Use the related facts to solve both calculations.

$$\text{If } \frac{1}{4} \text{ of } 40 = \square$$

$$\text{then } \frac{3}{4} \text{ of } 80 = \square$$



VF

12a. Use counters to match the calculation to the answer.

A. $\frac{6}{9}$ of 27

20

B. $\frac{3}{8}$ of 80

18

C. $\frac{6}{9}$ of 270

30

D. $\frac{6}{12}$ of 40

180



VF

Lesson 4 - Calculate quantities

3) $\frac{3}{7}$ of $\underline{\quad}$ = 3
 Have a go!

4) $\frac{6}{8}$ of $\underline{48}$ = $\underline{\quad}$
 $3 \div 3 = 1$
 $1 \times 7 = 7$
 $48 \div 6 = 8$
 $8 \times 6 = 48$

Click [here](#) for today's video

Click [here](#) for today's printable worksheet

When you have had a go at everything you can, click [here](#) for today's answers

Calculate quantities

1 Match the calculations to the bar models.
 Work out the missing quantities.

$\frac{1}{4}$ of \square = 5

$\frac{1}{4}$ of \square = 4

$\frac{1}{5}$ of \square = 5

$\frac{1}{3}$ of \square = 4

2 Complete the sentences.

- a) When one fifth is 1, the whole is \square
 When one fifth is 10, the whole is \square
 When one fifth is 20, the whole is \square
- b) When $\frac{1}{7}$ is 2, the whole is \square
 When $\frac{1}{7}$ is 4, the whole is \square
 When $\frac{1}{7}$ is 8, the whole is \square

3 Complete the bar models and fill in the whole.

a)

b)

c)

d)

4 Complete the calculations.

- a) $\frac{1}{2}$ of \square = 30 e) $\frac{3}{7}$ of \square = 15
 b) $\frac{1}{2}$ of \square = 15 f) $\frac{5}{7}$ of \square = 15
 c) $\frac{1}{4}$ of \square = 15 g) $\frac{5}{7}$ of \square = 35
 d) $\frac{3}{4}$ of \square = 15 h) $\frac{7}{5}$ of \square = 35

5 Dora and Mo have a full bottle of juice.

Dora drinks $\frac{2}{5}$ of the juice.
 Mo drinks $\frac{1}{5}$ of the juice.
 There is 150 ml of juice left in the bottle.
 How much juice was in the full bottle?

\square ml

6 Rosie and Ron are collecting red and blue counters.

They have the same number of blue counters.
 They have a different number of red counters.

Rosie: I have 18 counters altogether. $\frac{2}{3}$ are blue.

Ron: $\frac{3}{4}$ of my counters are blue.

a) How many counters does Ron have altogether?

\square

b) How many red counters do they each have?

Rosie has \square red counters.

Ron has \square red counters.



Lesson 1 - Identify angles

Angle A

- I am more than 18×5
- I am two digits
- I am odd

Obtuse. 91, 93, 95, 97 or 99 degrees

Angle B

- Half of me is between 40 and 50
- I am a multiple of 3 and 6
- My digits sum to the answer to $72 \div 8$

Right angle. 90 degrees

Angle C

- I am a multiple of 7
- $09:40 \times 7$

Click [here](#) for today's video

Click [here](#) for today's printable worksheet

When you have had a go at everything you can, click [here](#) for today's answers

Identify angles

1 Complete the sentences. Use the word bank to help you.


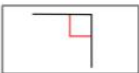

Word bank: 90, 180, greater, less

a) A right angle is degrees.


b) An acute angle is _____ than degrees.

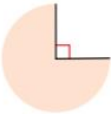
c) An obtuse angle is _____ than degrees but less than degrees.


2 Match the angles to the labels.


	right angle
	acute angle
	obtuse angle


3 Label the angles: acute, obtuse or right angle.

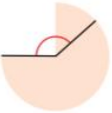
a)  _____

b)  _____


c)  _____

d)  _____


e)  _____

f)  _____


4 Tick all the acute angles.

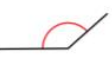



5 Tick all the obtuse angles.

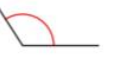


6 Label the angles: acute, obtuse or right angle.

a)  _____

b)  _____

c)  _____

d)  _____

7 Is the angle acute, obtuse or a right angle?


a) 35° _____ d) 89° _____



b) 99° _____ e) 121° _____

c) 90° _____ f) 179° _____

How do you know?

8

 Angle B is obtuse because it's bigger than the right angle.

A  B 

Do you agree with Teddy? _____

Explain your answer.

9 Are the statements always true, sometimes true or never true? Explain your answer.

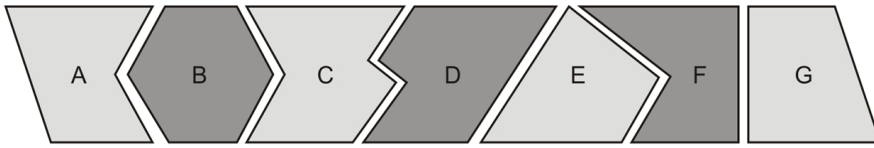
a) An obtuse angle is a greater turn than an acute angle. _____

b) An acute angle is a greater turn than a right angle turn. _____

c) If you turn through two acute angles you will have turned through an obtuse angle. _____

Mid-week check-up: Quickfire questions

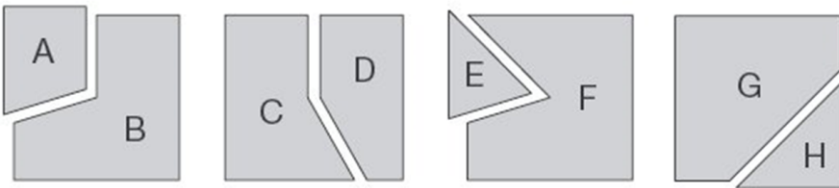
Here are seven shapes.



Write the letters of the two shapes which are **pentagons**.

and

Each of these four squares has been cut into two new shapes.



Write the letters of all the new shapes that are **hexagons**.

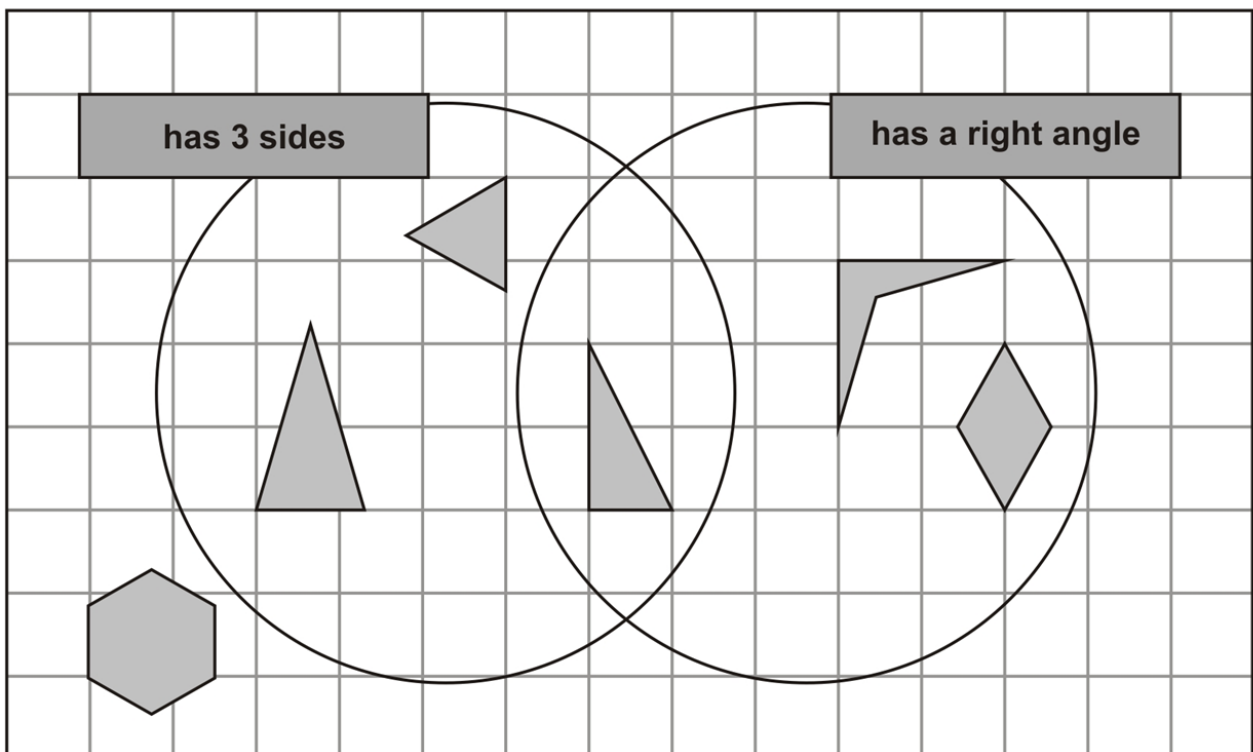
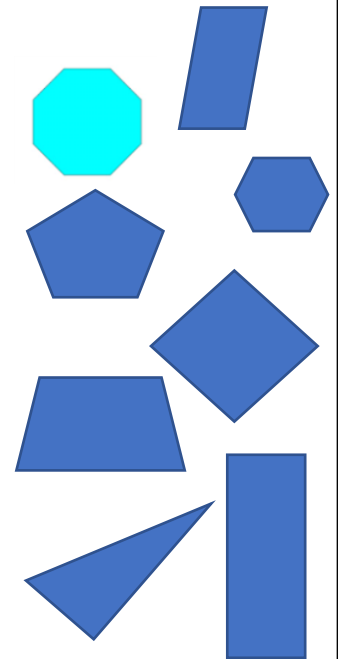
Here is a diagram for sorting shapes.

One of the shapes is in the wrong place.

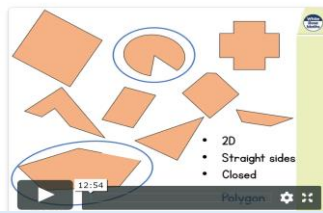
Put a cross (X) on it.

These are the names you need:
parallelogram, square, triangle, rectangle,
pentagon, octagon, hexagon, trapezium

Name the shapes and describe their properties- e.g angles, parallel sides, perpendicular sides, lines of symmetry. If you don't know these, look them up and write the definitions:



Lesson 3 - Triangles



Click [here](#) for today's video

Click [here](#) for today's printable worksheet

When you have had a go at everything you can, click [here](#) for today's answers

Triangles

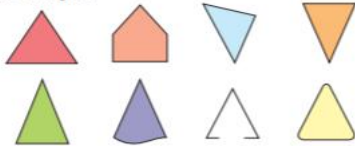
1 Here are some shapes.



- a) Tick the polygons.
- b) Talk to a partner about the shapes you have not ticked. Why are they not polygons?
- c) Write a definition of a polygon.

Compare your definition with a partner's.

2 Tick the triangles.



For any shapes you have not ticked, talk to a partner about why somebody might think they are triangles.

3 Ron is classifying triangles.



This is an upside down triangle.



- a) Ron is incorrect. Explain why.

- b) What type of triangle is it? _____

4 Annie is identifying shapes.



This shape has 3 sides, so it is a triangle.



- Do you agree with Annie? _____
- Explain your answer.

5 Match the type of triangle to the definition.

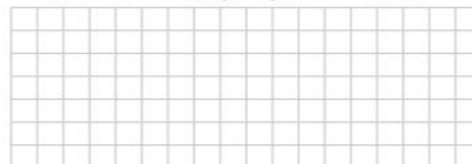
scalene	2 sides and 2 angles equal
equilateral	no sides or angles equal
isosceles	all sides and all angles equal

6 Label each triangle as either equilateral, isosceles or scalene. You will need to measure the side lengths.

A 	B 	C
D 	E 	F
_____	_____	_____

7 Draw each triangle in the grid.

- a) isosceles
- b) right-angled
- c) scalene



Which triangle was hardest to draw?

8 The diagram shows an equilateral triangle and a square. The perimeter of the square is 100 cm. Work out the perimeter of the compound shape.



perimeter = cm

Lesson 4 - Quadrilaterals

I have 4 right angles. You can calculate my perimeter if I tell you the length of one side.

I have 4 straight sides.

All my sides are equal. I have no right angles.

I have one pair of parallel sides.

Have a go

Quadrilateral

Rhombus

Square

Trapezium

Click [here](#) for today's video

Click [here](#) for today's printable worksheet

When you have had a go at everything you can, click [here](#) for today's answers

Quadrilaterals

1 Use the word bank to label each quadrilateral.

- rhombus parallelogram trapezium
rectangle square

a) _____

b) _____

c) _____

d) _____

e) _____

How did you know which shape was which?

2 Here are some quadrilaterals.

A B C

D E

- a) Mark any right angles on the shapes. One shape has been done for you.
- b) Mark any pairs of parallel lines. One shape has been done for you.
- c) Which shapes do not have any right angles? _____
- d) Which shapes have two pairs of parallel lines? _____
- e) Which shapes have four equal sides? _____

Compare answers with a partner.

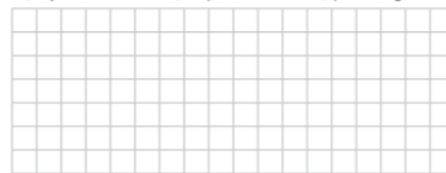
3 Complete the table.

Shape	Polygon?	Number of sides	Number of right angles	Number of pairs of parallel sides	Number of equal sides
	Yes	4	4	2	2 pairs
					2

What is the same about all of the shapes?
What is different?

4 Draw the shapes on the grid.

- a) square b) trapezium c) parallelogram



5 This is a square because it has got 4 equal sides.

Do you agree with Rosie? _____
Explain your answer.

6 Complete this Frayer Model to describe a quadrilateral.

My definition	Key characteristics
Example	Non-example

Quadrilateral