

Activity Booklet 1

Name: _____





Look at the superhero number sequences.

- Can you describe how the sequences are increasing or decreasing?
- Can you say the next three numbers in the sequence?



15, 18, 21, 24 ...

91, 84, 77, 70 ...



500, 525, 550, 575 ...



1,350, 1,250, 1,150, 1,050 ...



12, 24, 36, 48 ...

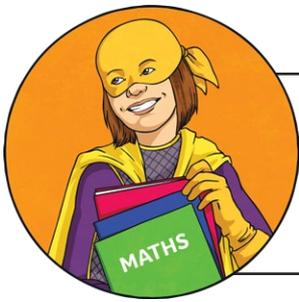


132,501, 131,501, 130,501, 129,501 ...



Extra Challenge: Create your own superhero counting challenge.

- Challenge a friend to describe how the sequence is increasing or decreasing. This is called the 'term-to-term rule'.



Play this fun, superhero card game to practise generating and describing linear number sequences. You will need the **Superhero Number Cards**.

Instructions:

- Take it in turns to turn over a Superhero Number Card.
Can you find where the number fits on the grid?
- The first player to complete a grid wins!

Count back in 1,000s

16,253

21,253

Count on in 100s

19,284

18,784

Count on in 1,000s

25,344

20,344



Colour the paths through the superhero mazes to join up the key numbers.



1. Term-to-term rule: + 9

90	99	108	117	108	117	108	126
108	81	144	126	135	126	81	180
126	72	108	99	144	153	162	171

2. Term-to-term rule: - 100

2,013	1,713	1,613	1,513	1,713	1,413	713	613
1,913	1,813	1,213	1,413	1,313	1,213	913	813
1,713	2,013	1,813	1,613	713	1,113	1,013	513

3. Term-to-term rule: - 25

600	575	600	550	450	375	350	325
625	550	650	500	425	400	425	375
675	525	500	475	450	300	350	400



Look at this **incorrectly** completed SATs question.

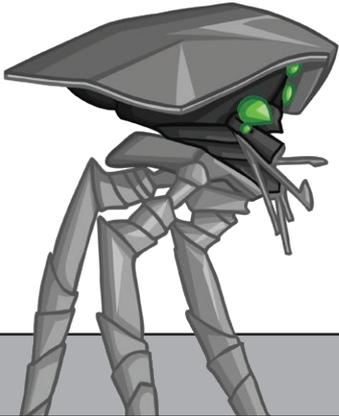
- What is the important information to identify?
- How is it best to work out the answer?
- What advice would you give to the child who completed this question?



1. The numbers in this sequence **decrease** by the same amount each time.

550	539	528	517
-----	-----	-----	-----

What is the next number in the sequence?



Colour in the superhero strength-o-meter to show how you feel about each of these questions:



●
●
●
●
●

Can you count forwards or backwards in steps of powers of 10?

Can you count forwards or backwards in multiples?

Can you solve problems involving number sequences?

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Look at the superhero numbers.

- Can you describe the numbers using the following vocabulary?

multiple

factor

prime

square

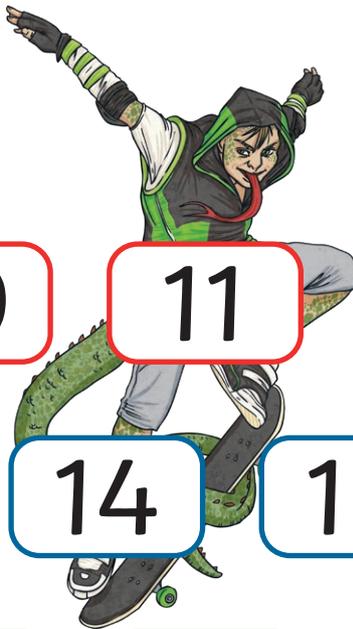


9

10

11

12



13

14

15

16



17

18

19

20



21

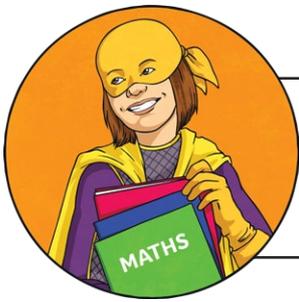
22

23

24



Extra Challenge: Play a game of number tennis with a friend. Choose your own two-digit number. Take it in turns to give one fact about the properties of this number. How long will the number volley last? Score a point if your partner can't think of a new number fact!



Play this dice game and practise describing the properties of numbers using the language of multiple, factor, square and prime. You will need a dice.



Instructions:

- On your turn, roll the dice twice. Use the numbers you roll to create a grid position and find the number in that position.
- Say a fact about the number relating to **multiples, factors, square numbers** and **prime numbers**.
- If you give a correct fact, you can colour the number in. If your fact is incorrect, the next player takes their turn.
- The first player to complete a row or column wins!



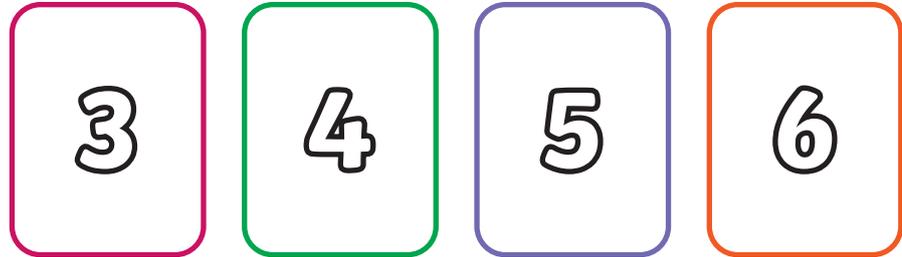
	30	39	42	25	34	22
	50	20	49	38	28	44
	35	51	26	53	46	31
	47	32	55	41	21	48
	23	54	43	33	52	36
	37	27	45	29	40	24
						



Have a go at solving these problems.



Here are four digit cards:



Use the digit cards to make all of the two-digit numbers that fit each statement:

Odd numbers	
Multiples of three	
Prime numbers	
Square numbers	

2. Colour in all the superheroes which are factors of 48.

 1	 18	 14	 8	 3	 6
 4	 28	 2	 20	 9	 12
 7	 10	 24	 5	 16	 48

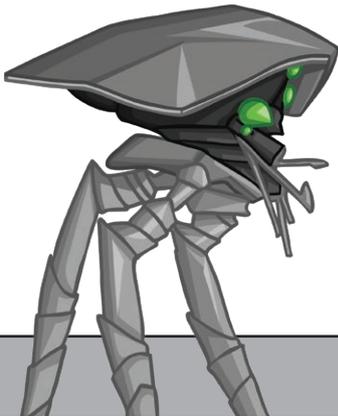


Look at this **incorrectly** completed SATs question.

- What is the important information to identify?
- How is it best to work out the answer?
- What advice would you give to the child who completed this question?

1. Write down all the factors of 24.

6, 8, 12, 24



Colour in the superhero strength-o-meter to show how you feel about each of these questions:



Can you identify factors and multiples?

Can you identify prime numbers?

Can you solve problems involving the properties of numbers?



Look at the fractions.

- Can you use the clues to identify which fraction each superhero is thinking of?

$$\frac{4}{5}$$

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

$$\frac{5}{6}$$

$$\frac{1}{8}$$

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

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

$$\frac{1}{2}$$

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

$$\frac{1}{3}$$



My fraction is equivalent to $\frac{9}{12}$.

My fraction is equivalent to $\frac{16}{20}$.

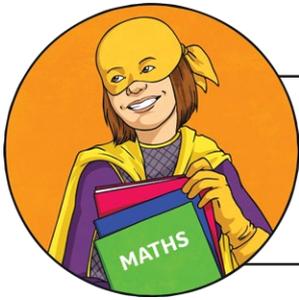


My fraction is equivalent to $\frac{30}{90}$.

My fraction is equivalent to $\frac{500}{1000}$.



Extra Challenge: Can you say an equivalent fraction for the other fractions?

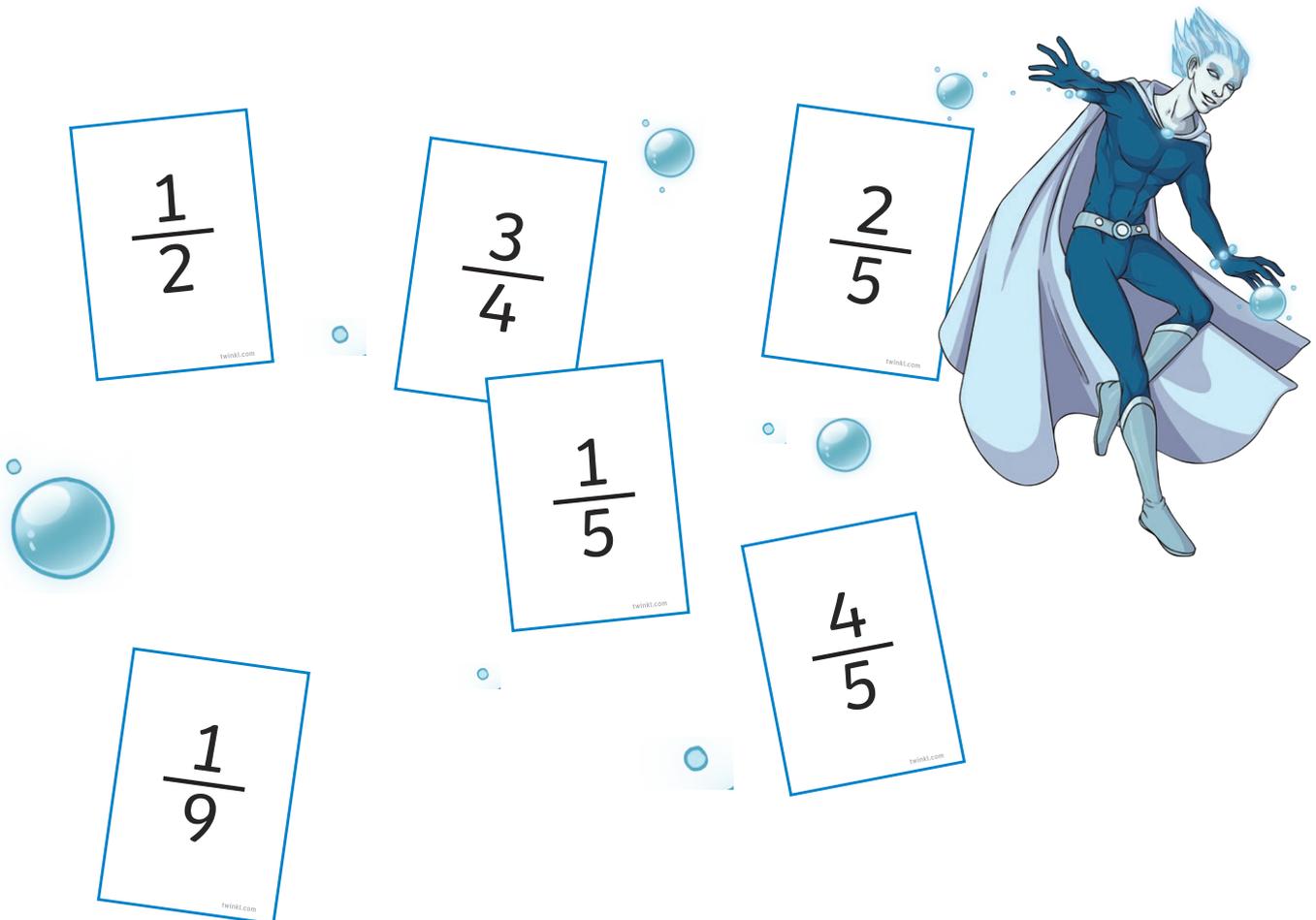


Play this fun card game to practise comparing fractions. You will need the **Fraction Cards**.



Instructions:

- Shuffle the Fraction Cards and share them out into equal piles, face down.
- Each player turns over their top card. Players must compare their fractions. The player with the greatest fraction scores a point.
- Discard the compared fraction cards and repeat by turning over the next card in each pile.
- The winner is the player who scores the most points.



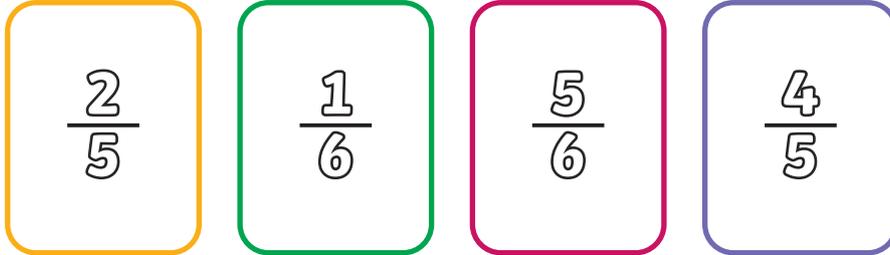
Extra Challenge: During each round of the game, can you use the greater than and less than symbols to write down a comparison statement using the fractions on the cards?



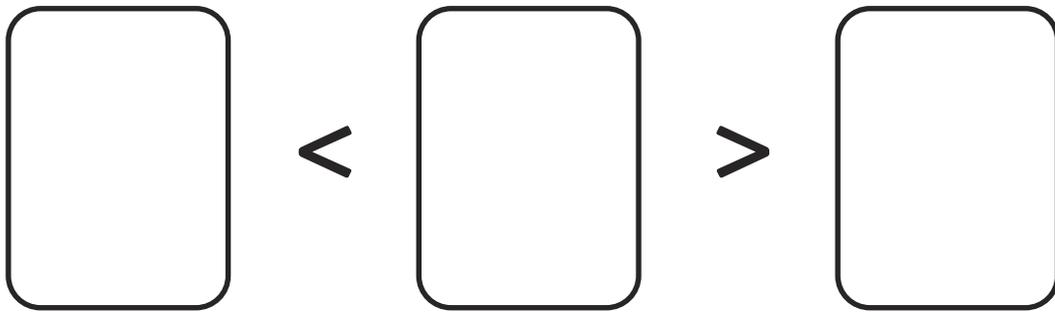
Have a go at solving these problems.



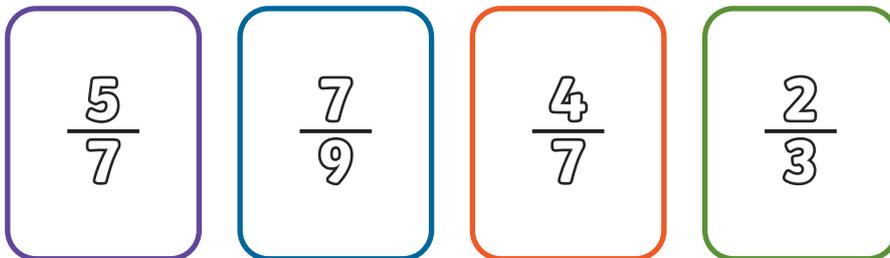
1. Here are four fraction cards.



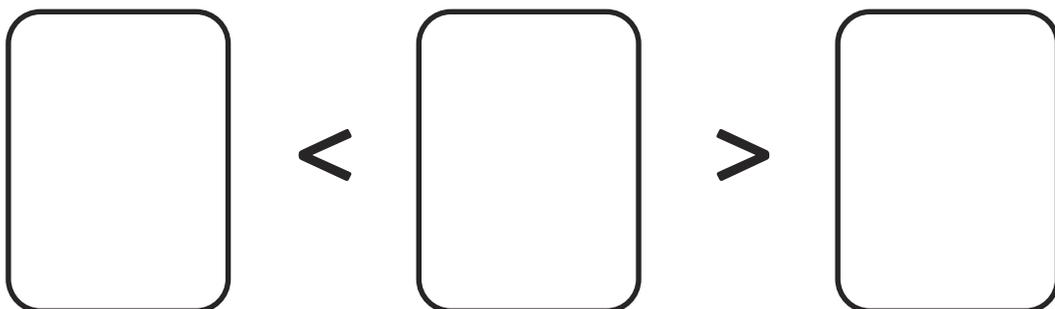
Use any three of the cards to make this comparison statement correct:



2. Here are four fraction cards.



Use any three of the cards to make this comparison statement correct:





Look at this **incorrectly** completed SATs question.

- What is the important information to identify?
- How is it best to work out the answer?
- What advice would you give to the child who completed this question?

$\frac{3}{5}$ is greater than $\frac{2}{3}$

Is this correct?

(Yes) / No

Explain your reasoning:

The numerator 3 is greater than the numerator 2 so $\frac{3}{5}$ is greater.



Colour in the superhero strength-o-meter to show how you feel about each of these questions:



Can you find equivalent fractions?

Can you use common multiples to express fractions in the same denominator?

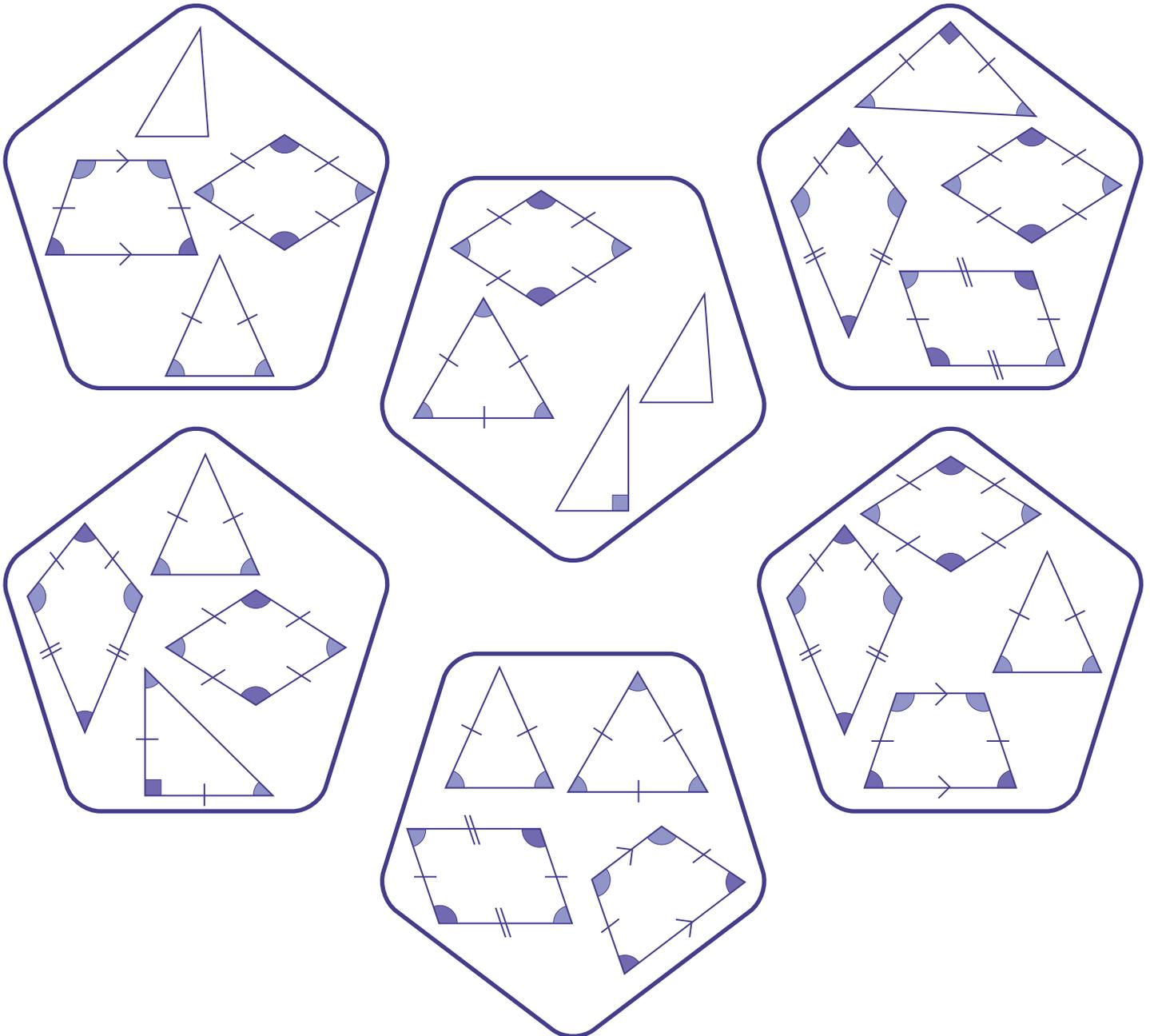
Can you order and compare fractions with different denominators?



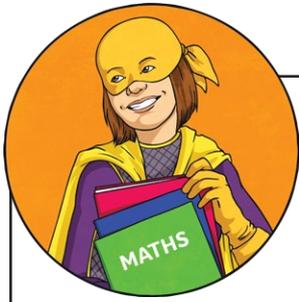
Look at the different superhero badges.



One player secretly chooses one of the badges. Can the other players find out which badge they have chosen by asking yes/no questions describing the properties of the shapes in its design?



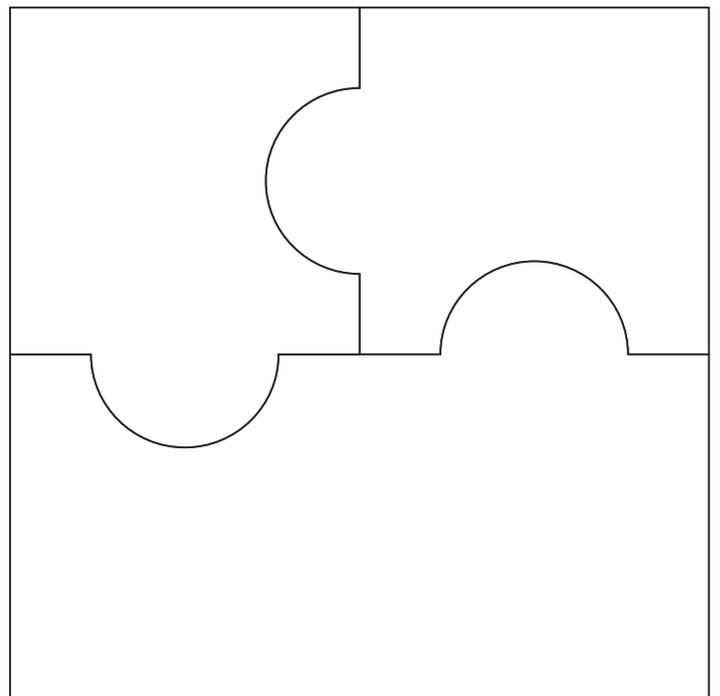
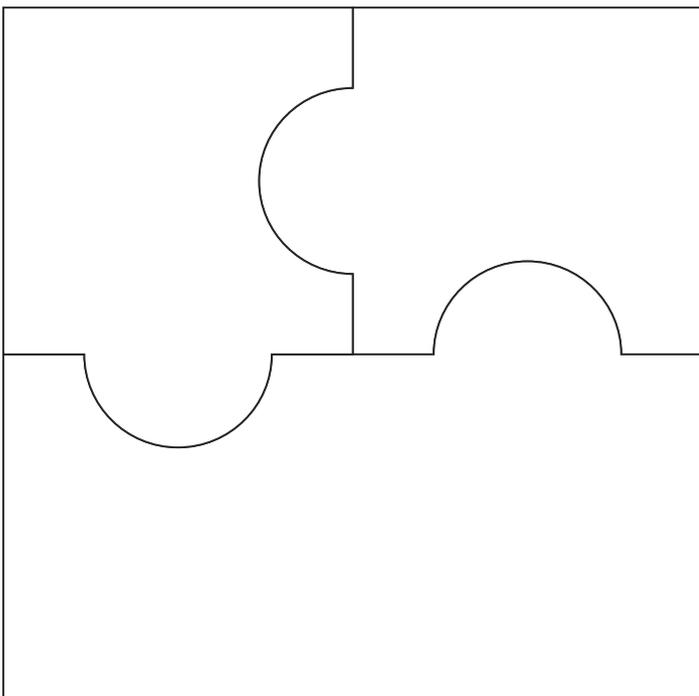
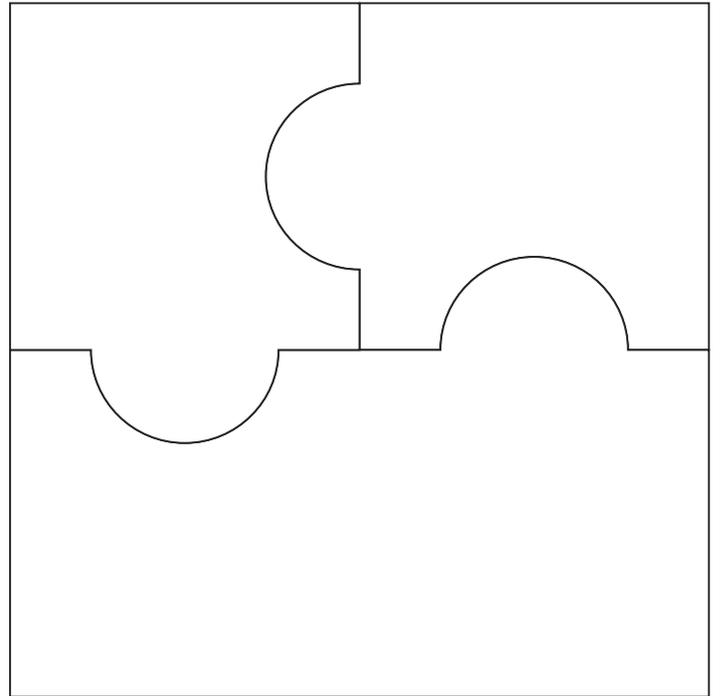
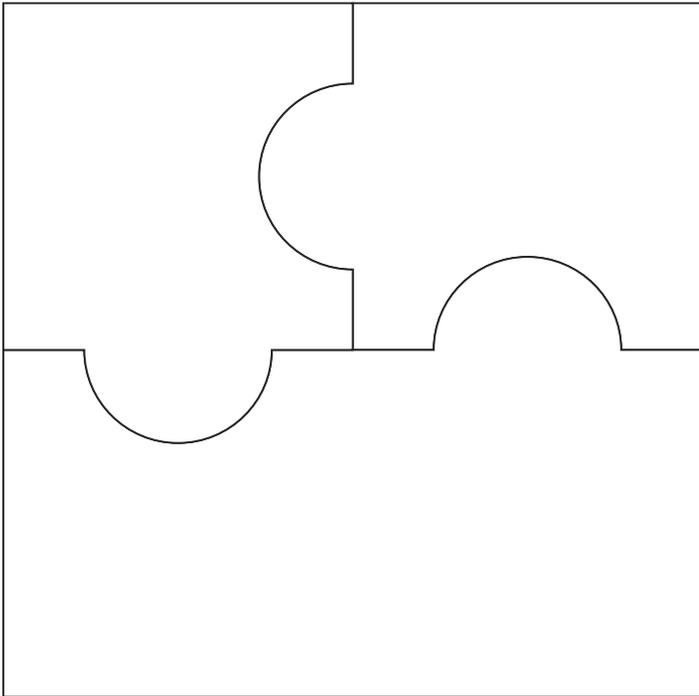
Extra Challenge: Draw your own set of superhero badges using a range of 2D shapes. Can a friend guess one of your badges by just asking yes/no questions about the shapes used in the designs?



Play this fun jigsaw game to practise identifying and describing quadrilaterals. You will need the **Quadrilateral Jigsaw Cards**.

Instructions:

- Take it in turns to place a jigsaw piece on the board. If you complete a board, you win a point.





Have a go at answering these questions.



1. A rectangle has a perimeter of 22cm.

What could the length and width be?

Give two possible answers.

cm

and

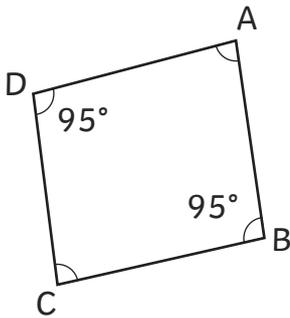
cm

cm

and

cm

2. Here is a rhombus with two of the angles labelled. Calculate the size of angle A.



3. On the grid below, draw an irregular octagon with one reflex angle.



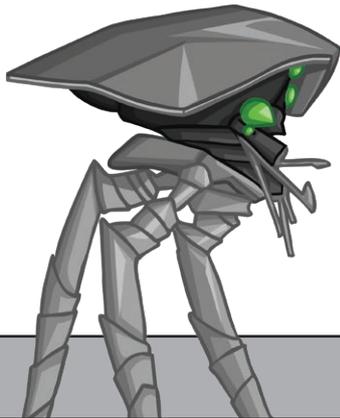


Look at this **incorrectly** completed SATs question.

- What is the important information to identify?
- How is it best to work out the answers?
- What advice would you give to the child who completed this question?

1. Complete the table to show the size of the angles in the triangle.

Type of triangle	Angle 1	Angle 2	Angle 3
Isosceles	86°	47°	40°



Colour in the superhero strength-o-meter to show how you feel about each of these questions:



Can you describe the properties of different triangles and quadrilaterals?

Can you calculate missing angles in triangles and quadrilaterals?

Can you draw 2D shapes using given dimensions and angles?



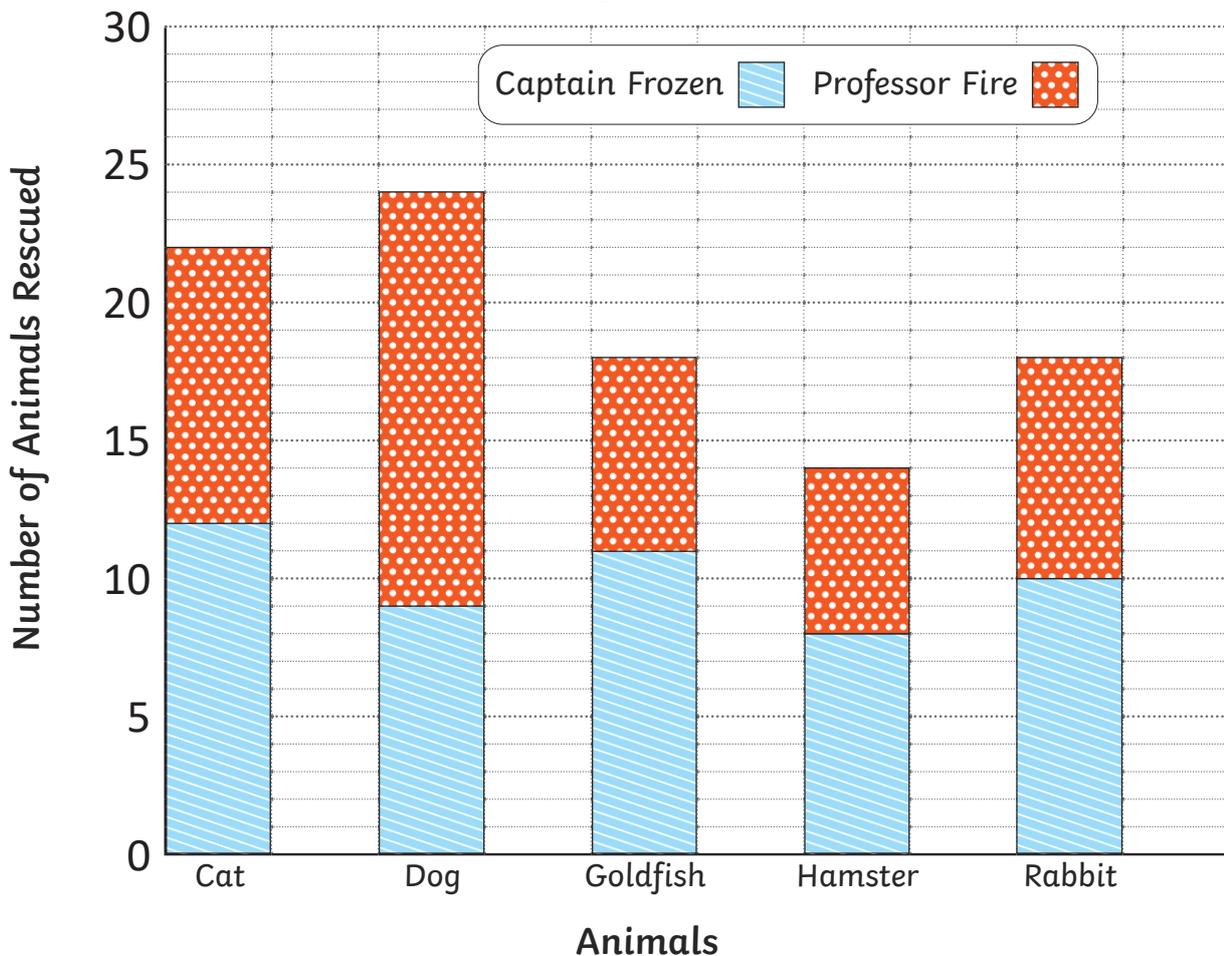
Look carefully at this bar chart which shows the animals rescued by the two superheroes **Captain Frozen** and **Professor Fire**.



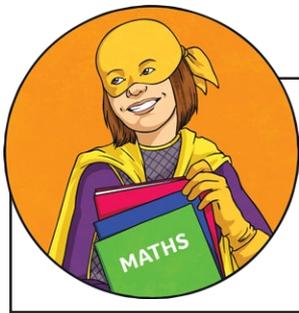
- Which animal did Captain Frozen rescue the most of?
- How many rabbits did Professor Fire rescue?
- How many fewer cats did Professor Fire rescue than Captain Frozen?



A Grouped Bar Chart to Show the Different Animals Rescued by the Superheroes



Extra Challenge: Can you make your own questions about the data shown in this grouped bar chart?



Play this fun, superhero board game to practise representing data as a line graph. You will need a dice and counters.



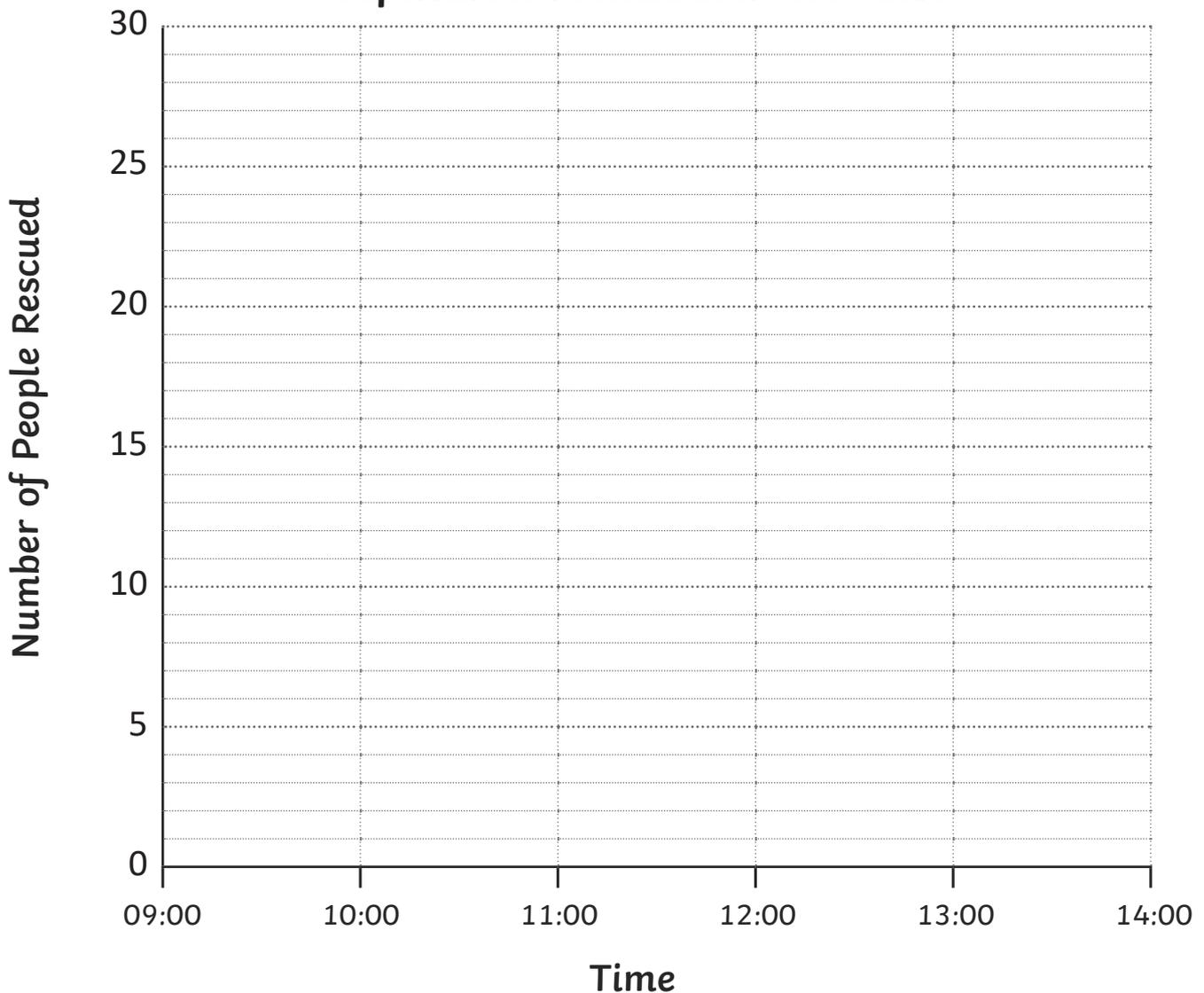
Instructions:

- Take it in turns to roll the dice and move your counter around the board. At the end of your turn, the space you land on shows how many people the superheroes rescued and at which time.
- At the end of each turn, add the data to the frequency table.
- After ten dice rolls, represent the data collected in the frequency table as a line graph.

09:00 1	12:00 4	13:00 3		12:00 2	09:00 4	13:00 1	
10:00 6		14:00 6	10:00 5	14:00 3		11:00 3	
11:00 2						09:00 6	10:00 1
12:00 5		12:00 3	09:00 5	11:00 1		11:00 4	
13:00 4		13:00 6		14:00 4	09:00 9	13:00 5	
14:00 2	10:00 1	11:00 6			11:00 5	10:00 3	12:00 1

Time	Tally of how many people were rescued	Frequency of how many people were rescued
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		

A Line Graph to Show How Many People the Superheroes Rescued over Five Hours





Have a go at answering these questions using the line graph you created.



1. How many people did the superheroes rescue altogether?

2. What was the difference in the number of people the superheroes had rescued at 10:00 and 11:00?

3. What was the difference in the number of people the superheroes had rescued at 12:00 and 13:00?

4. Does the data show a trend? If so, how would you describe it?

5. Approximately, how many people had the superheroes rescued by 11:30?





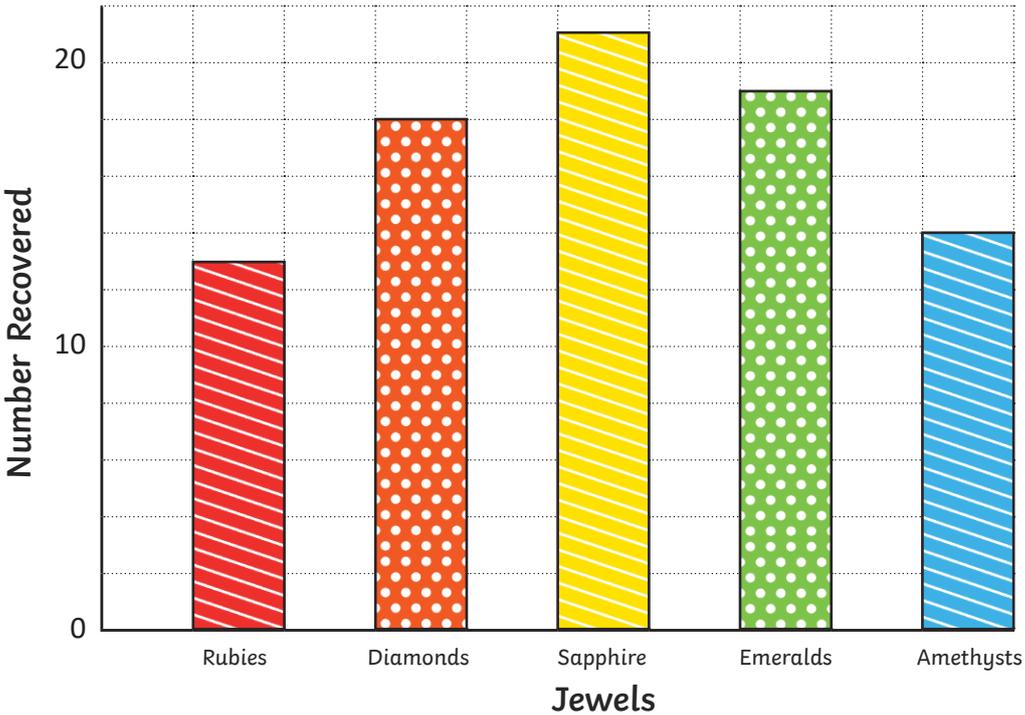
Look at this **incorrectly** completed SATs question.

- What is the important information to identify?
- How is it best to work out the answers?
- What advice would you give to the child who completed this question?

1. How many more emeralds did the superheroes recover than rubies?

7

A Bar Chart to Show How Many Jewels the Superheroes Recovered



Colour in the superhero strength-o-meter to show how you feel about each of these questions:

● ● ● ● ● ●

Can you interpret bar charts?

Can you interpret line graphs?

Can you ask and answer questions about data?