

**At home materials
Guidance Pack
Year 4 Weeks 5-9**

Week 5	Pack 17: Lines, length and perimeter Session A) Estimating length Session B) Parallel and perpendicular Session C) Perimeter Session D) Exploring perimeter	★ ★ ★ ★
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Week 6	Pack 15: Shape and symmetry Session A) Describing polygons Session B) Composing shapes Session C) Reflection symmetry Session D) Symmetry of regular polygons	★ ★ ★ ★
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Week 7	Pack 16: Triangles and Quadrilaterals Session A) Creating triangles Session B) Describing triangles Session C) Creating quadrilaterals Session D) Describing quadrilaterals	★ ★ ★ ★
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Week 8	Pack T1: Time Session A) Measuring time Session B) Time across a day Session C) Hour hand Session D) Minute hand	★ ★ ★ ★
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Week 9	Pack T2: Telling the time Session A) Rewind to o'clock Session B) Hour hand confusion Session C) Hand mix up Session D) Telling errors	★ ★ ★ ★
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Timing

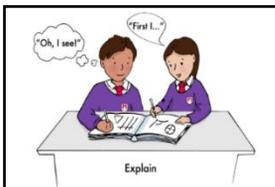
Each session is 30 minutes
20 minute Talk Task and 10 minute independent activity

Session guidance

Get **them** talking and grow their language.

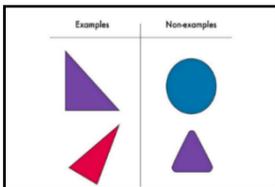
Get **them** to use equipment, manipulatives, models and images to show and explain.

Challenge them to think mathematically. Use the 'Prompts for Thinking' listed below to help them build habits in the way they think about mathematical situations.



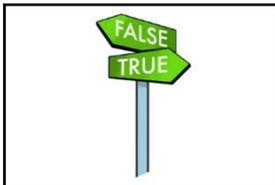
Reason it

Explain how you know. Focus on reasons rather than answers. What could you say, do, draw or write to help someone else understand?



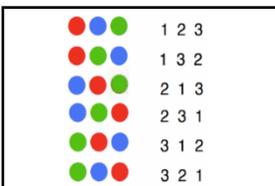
Generate examples and non-examples

What are the important features? What features are not important (e.g. colour)?



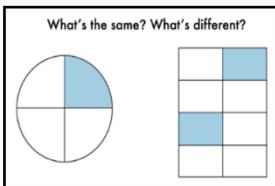
True or false?

If true, give examples to support your answer. If false, give a counter example.



Find all possibilities

Have you found all the possible answers? How do you know? Did you work systematically?



What's the same? What's different?

Compare and contrast and look for connections. How many different answers can you give?



Always, sometimes or never true?

Give examples to show if the statement is always, sometimes or never true. How do you know?

At home materials

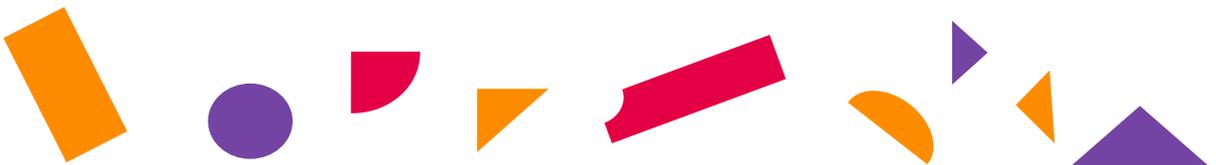
Pack 17: Lines, length and perimeter

Session A) Estimating length

Session B) Parallel and perpendicular

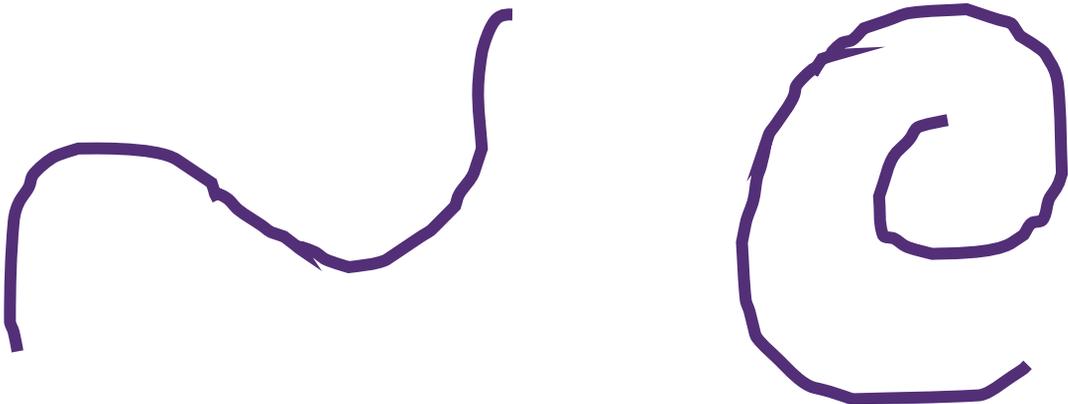
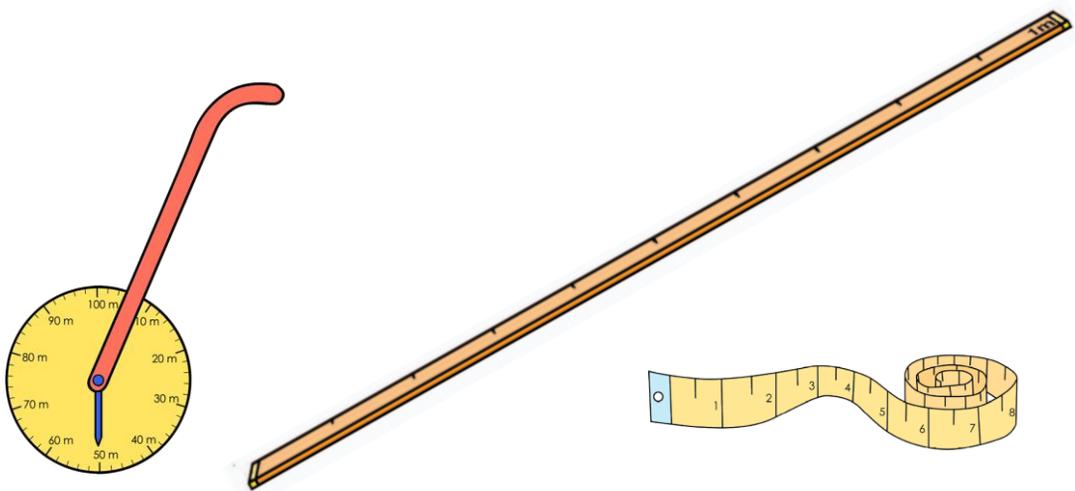
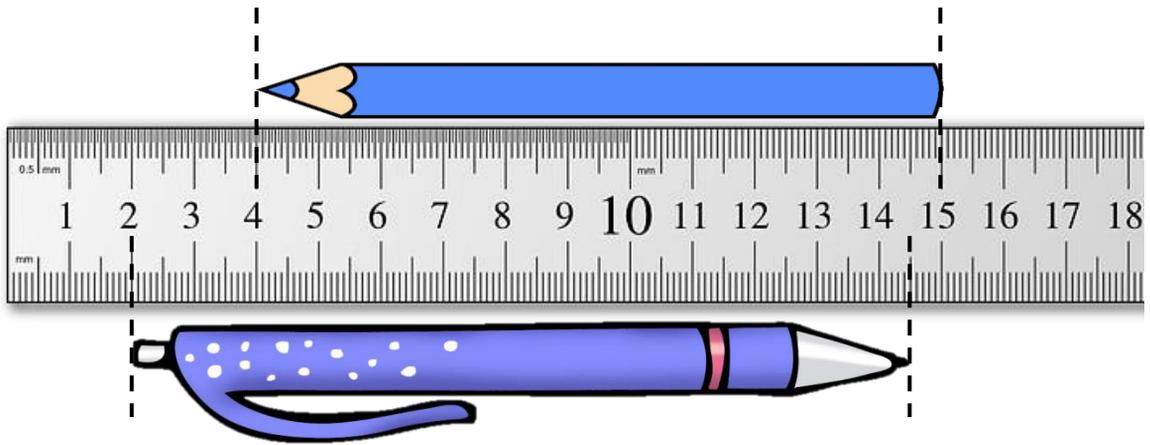
Session C) Perimeter

Session D) Exploring perimeter



Pack 17 Session A

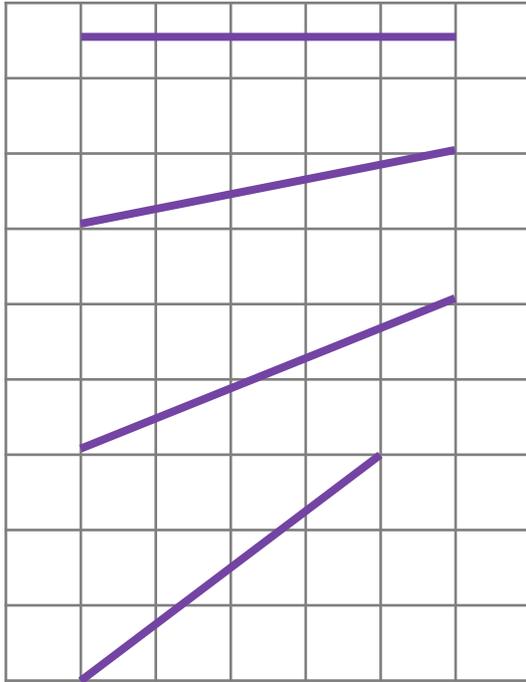
Talk Task: Estimating length



Pack 17 Session A

Activity: Estimating length

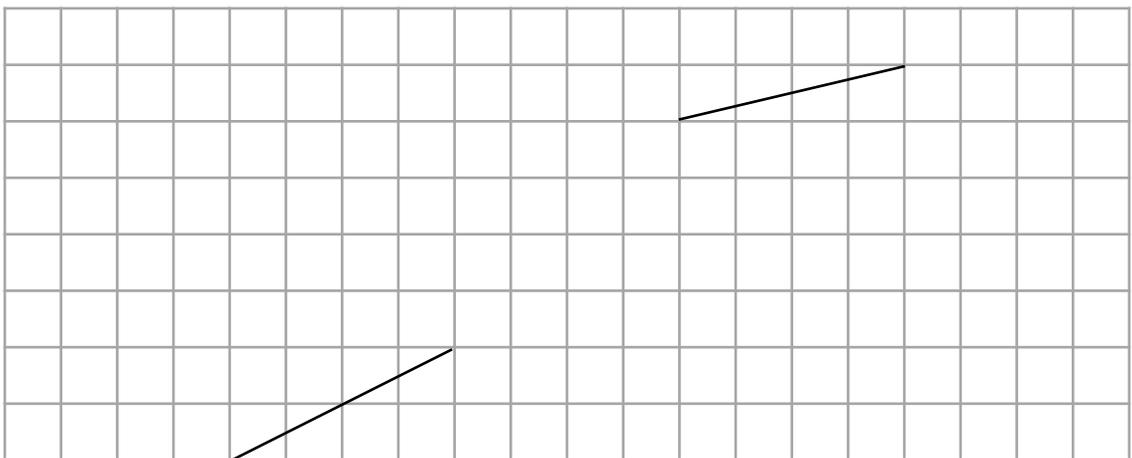
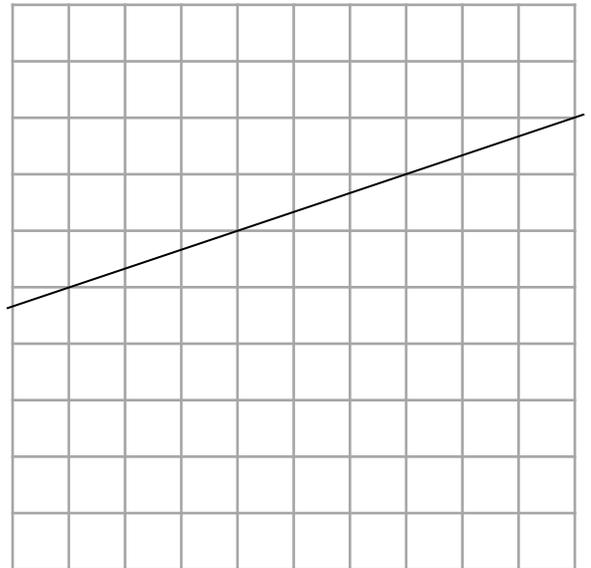
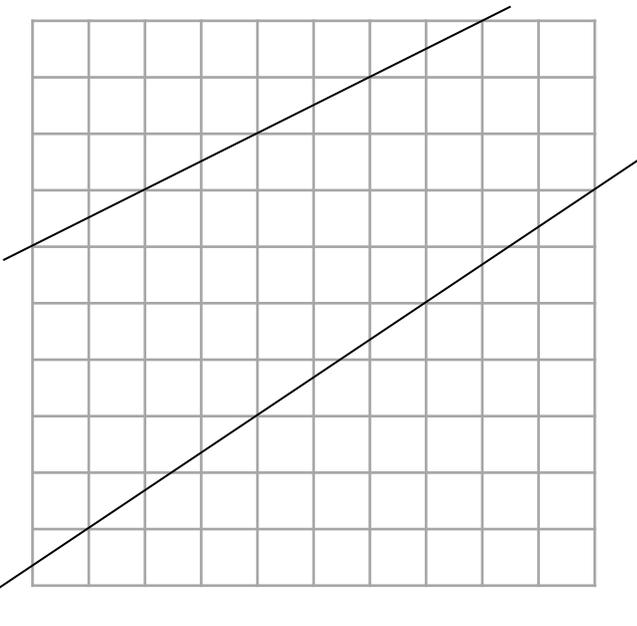
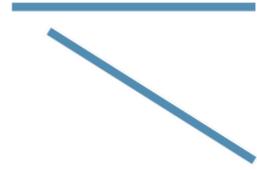
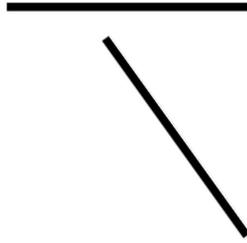
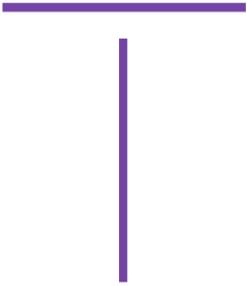
- 1) Are these lines longer or shorter than 5 cm? Measure and write down the length of each.



- 2) Draw straight and curved lines that are approximately 5 cm long. Use a ruler and string to measure the length and check your accuracy.

Pack 17 Session B

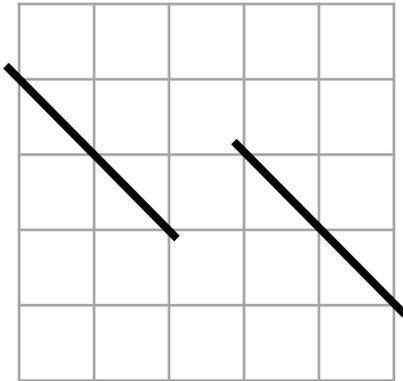
Talk Task: Parallel and perpendicular

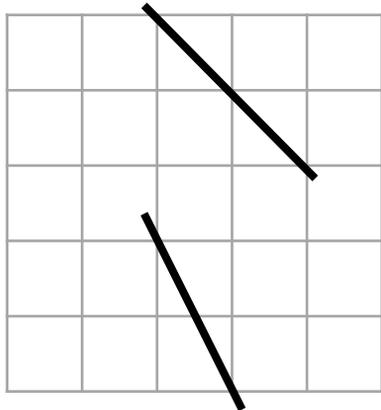


Pack 17 Session B

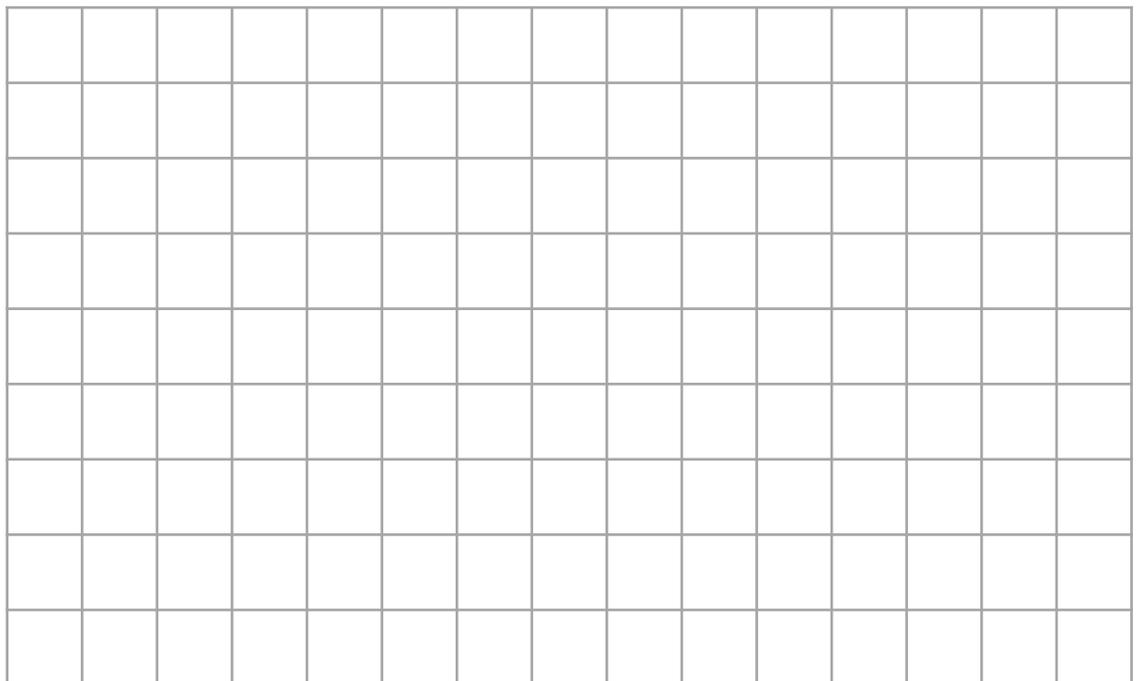
Activity: Parallel and perpendicular

1) Draw and write to show how you know if the lines are parallel or not

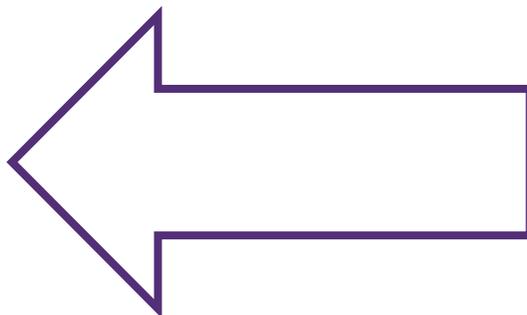
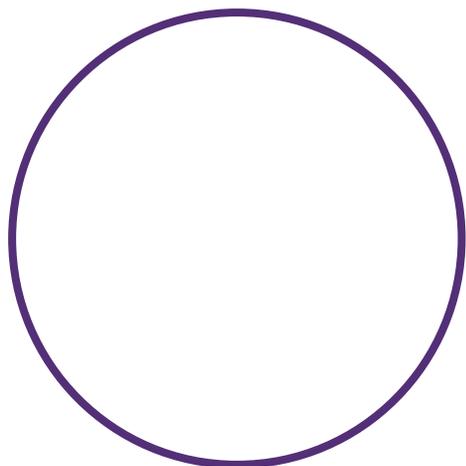
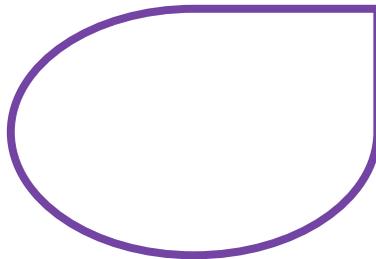
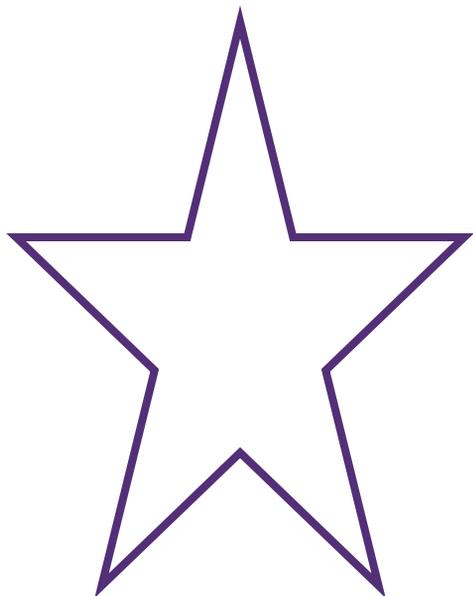
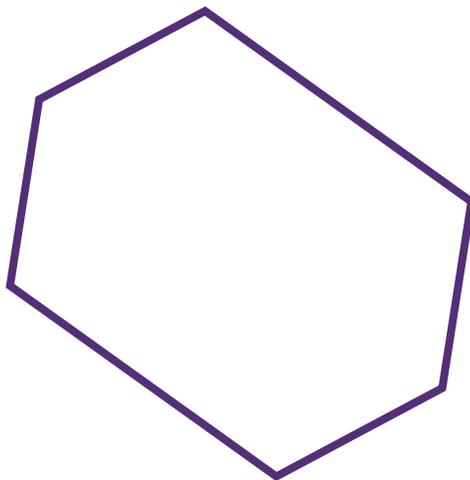
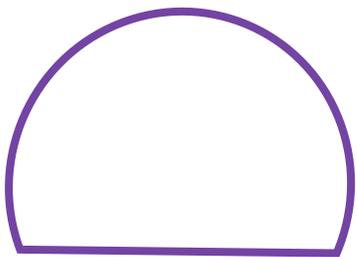




2) Create examples and non-examples for parallel and perpendicular lines.



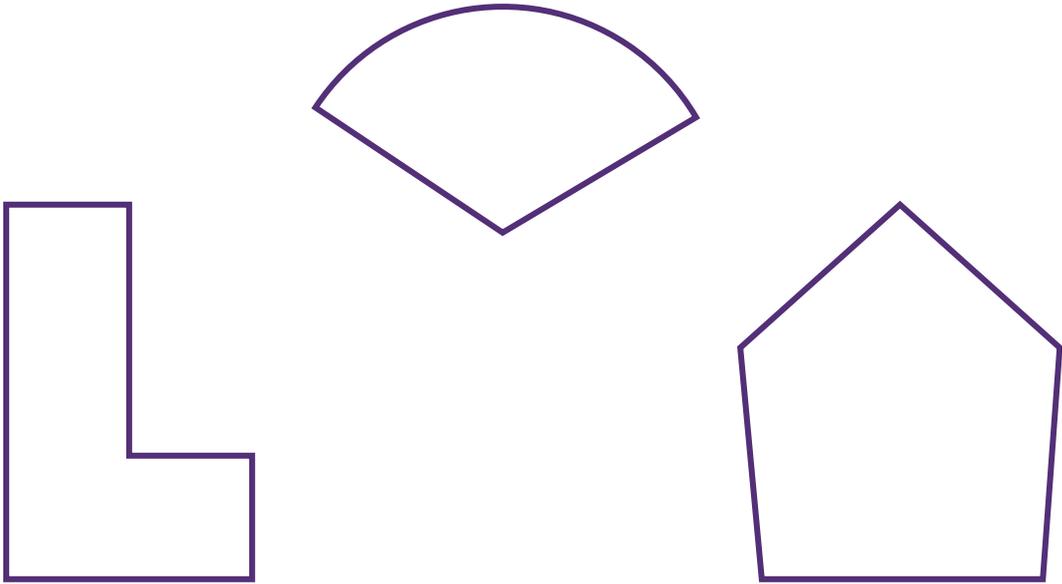
Pack 17 Session C
Talk Task: Perimeter



Pack 17 Session C

Activity: Perimeter

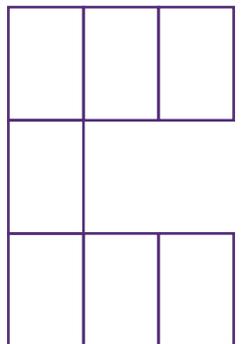
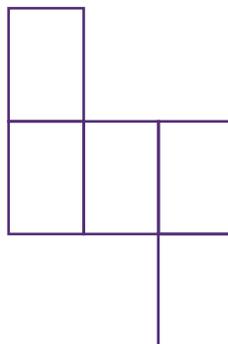
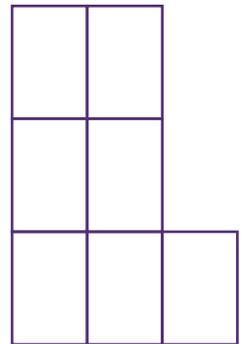
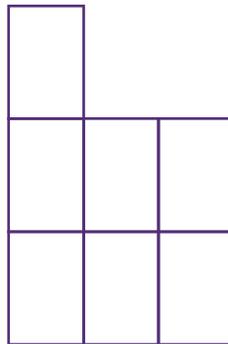
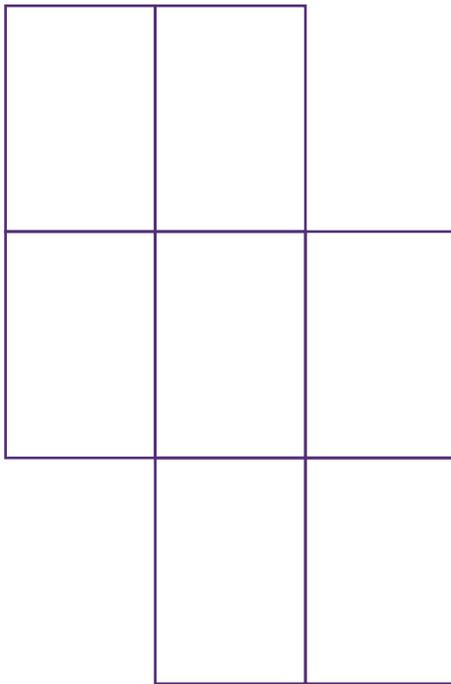
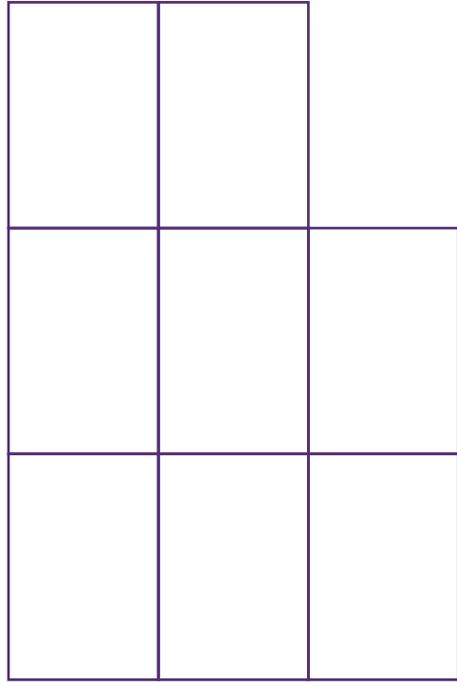
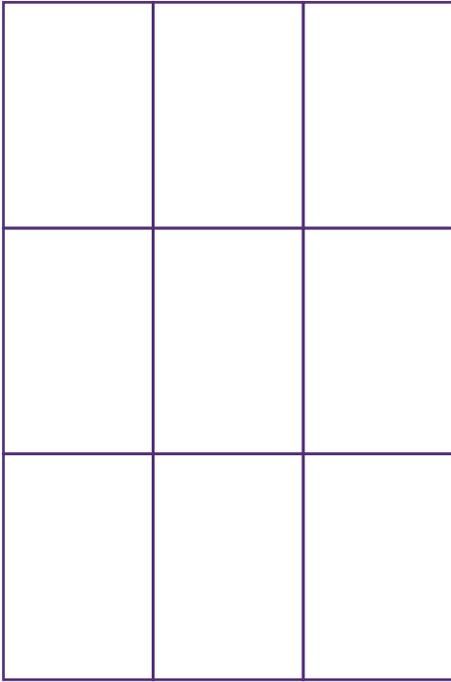
- 1) Estimate and then measure and calculate the perimeter of each shape.



- 2) Sketch shapes with a perimeter of approximately 15 cm.

Pack 17 Session D

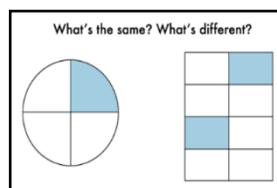
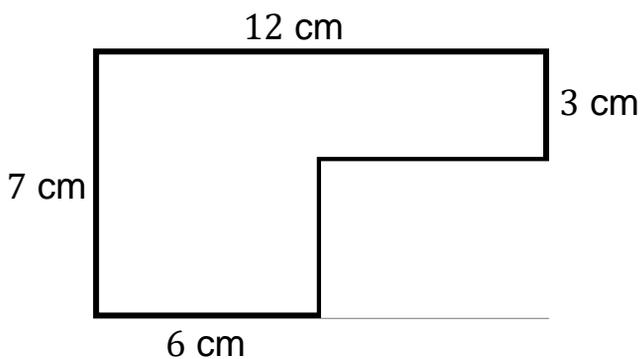
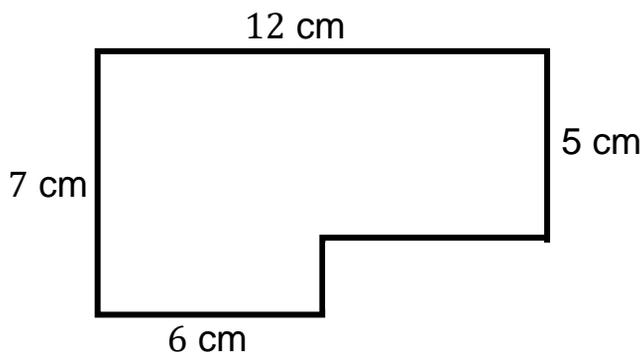
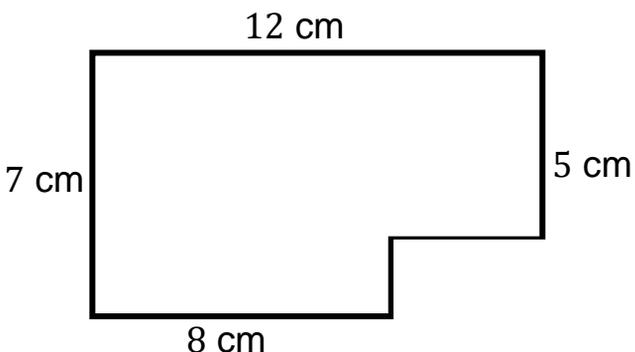
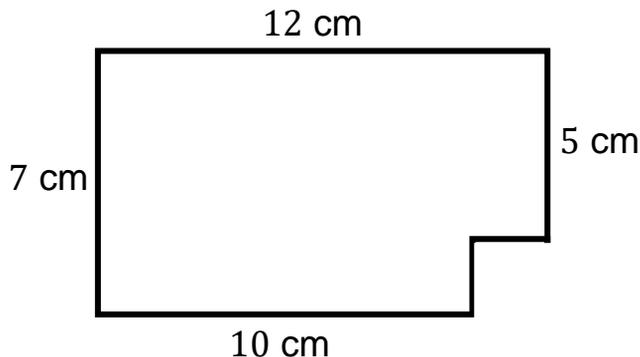
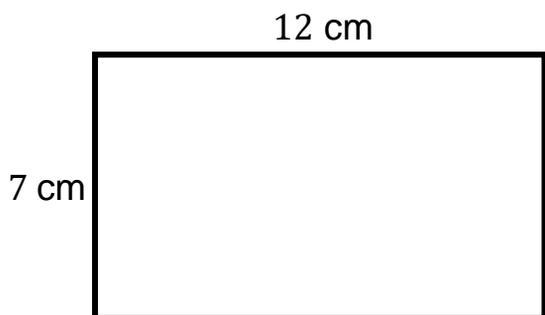
Talk Task: Exploring perimeter



Pack 17 Session D

Activity: Exploring perimeter

Work out the perimeter. Remember to include missing lengths



What do you notice?
Where could you go next?

At home materials

Pack 15: Shape and symmetry

Session A) Describing polygons

Session B) Composing shapes

Session C) Reflection symmetry

Session D) Symmetry of regular polygons



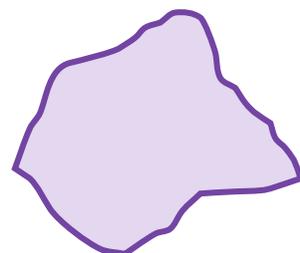
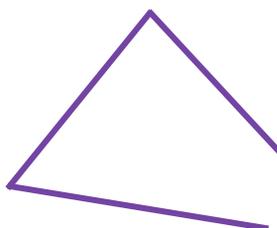
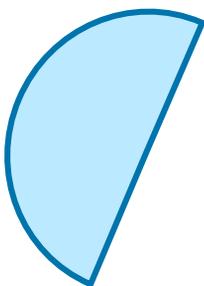
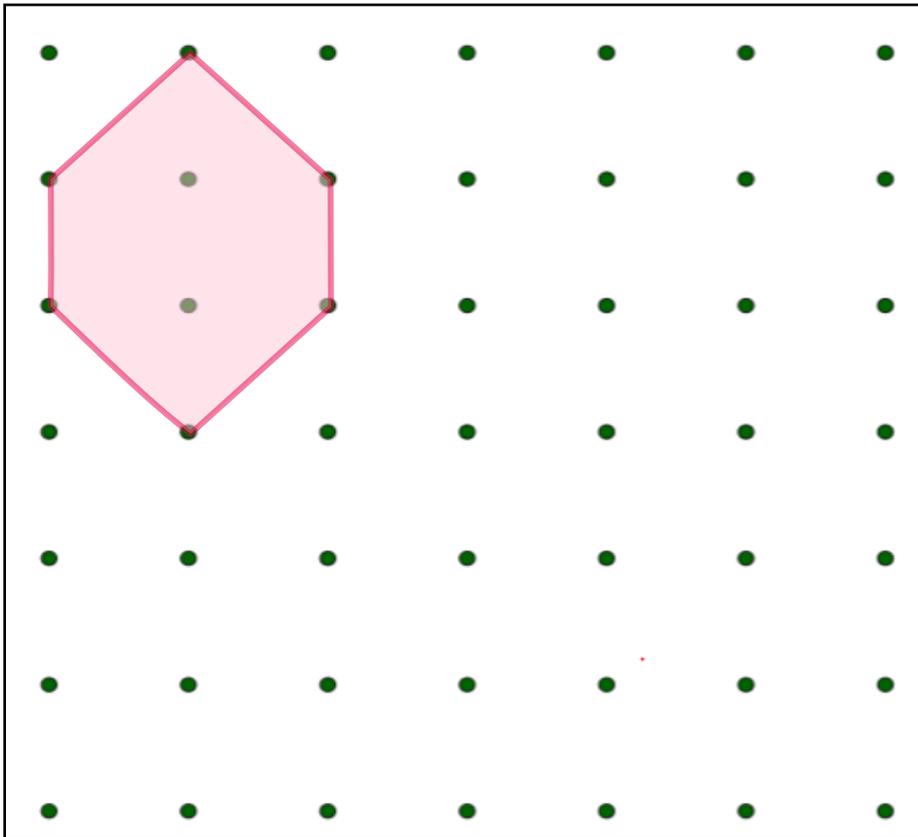
Pack 15 Session A

Talk Task: Describing polygons

Examples	Non-examples
	

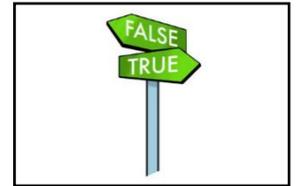
An acute angle is less than 90° or a right angle

An obtuse angle is greater than 90° or a right angle

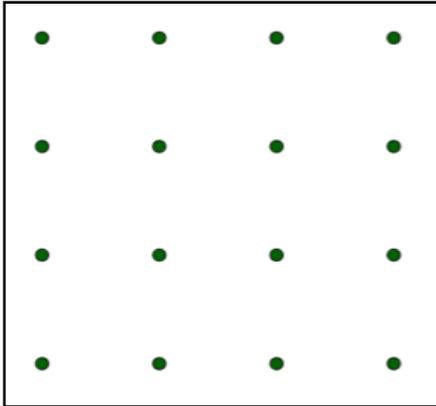


Pack 15 Session A

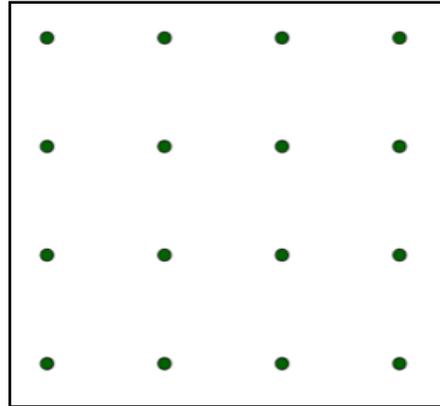
Activity: Describing polygons



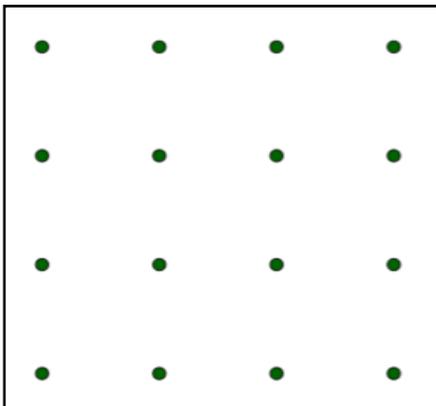
1) Is each one true or false? Show an example or if you think it is false, show how close you can get.



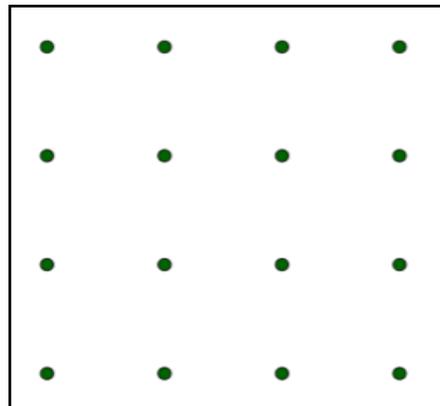
I can make a pentagon with two right angles



I can make a quadrilateral with three acute angles

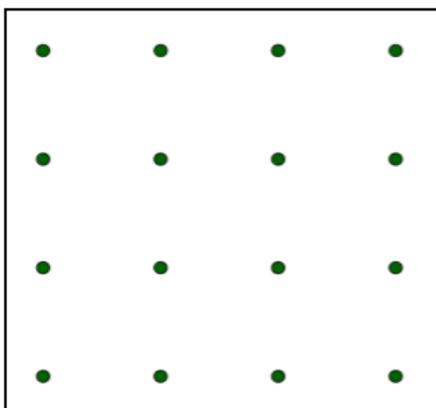


I can make a hexagon with two right angles

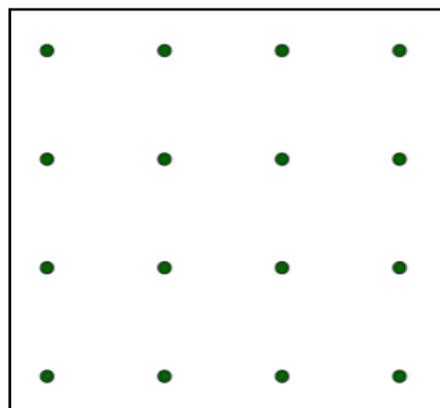


I can make a triangle with an acute angles

2) Write your own statements. One true and one false.



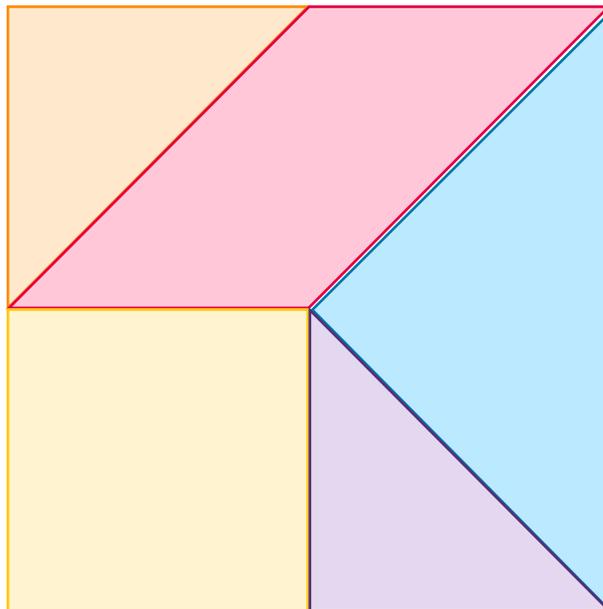
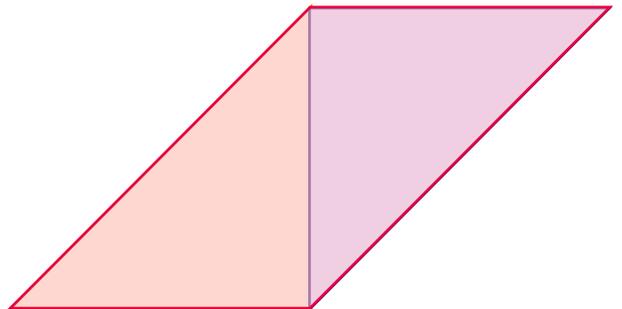
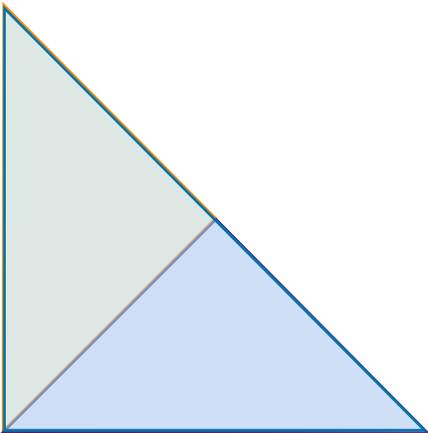
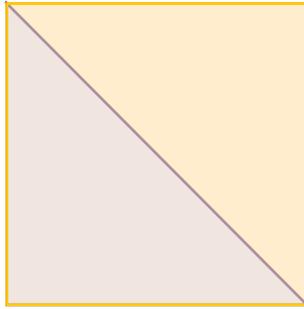
I can make _____



I can make _____

Pack 15 Session B

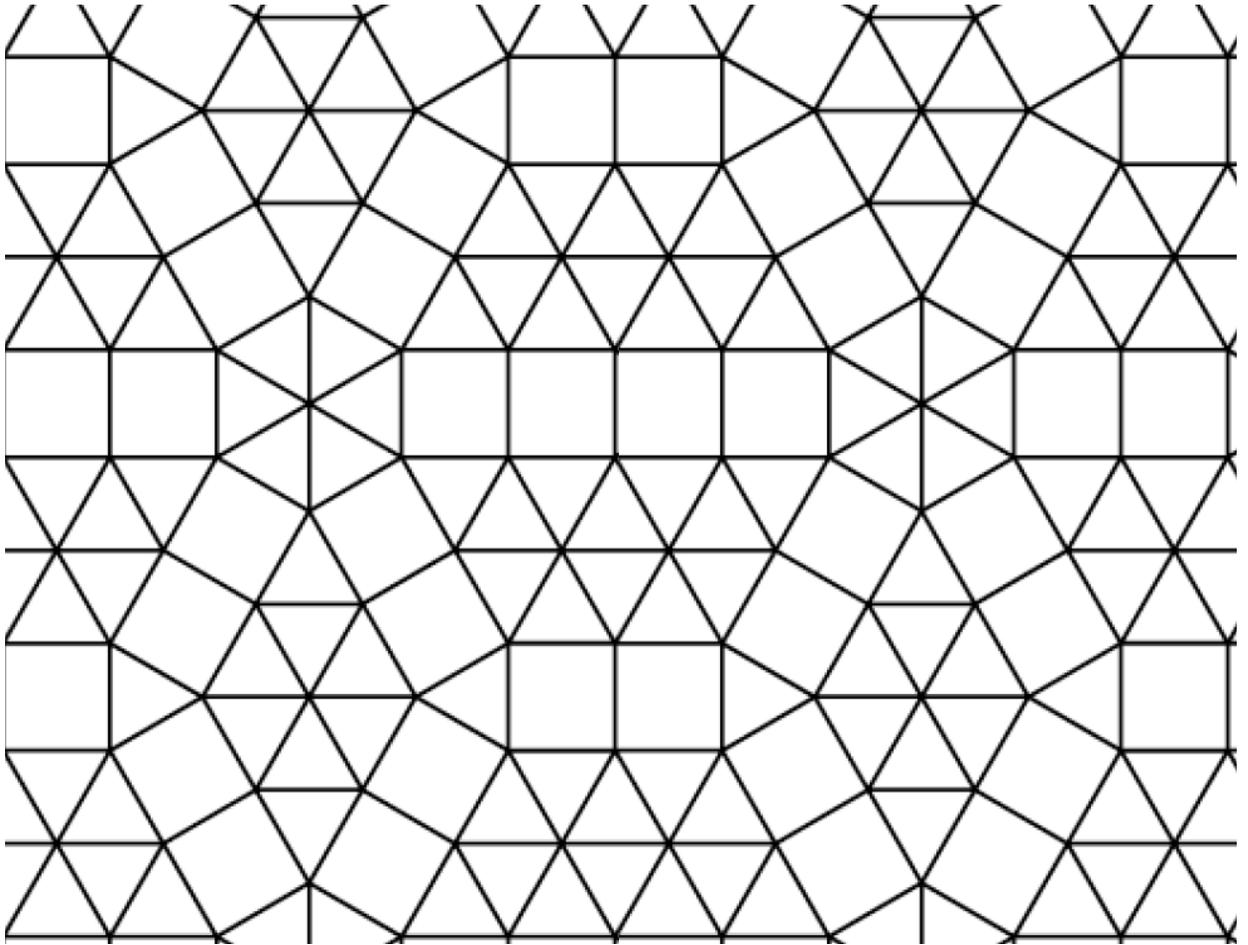
Talk Task: Composing shapes



Pack 15 Session B

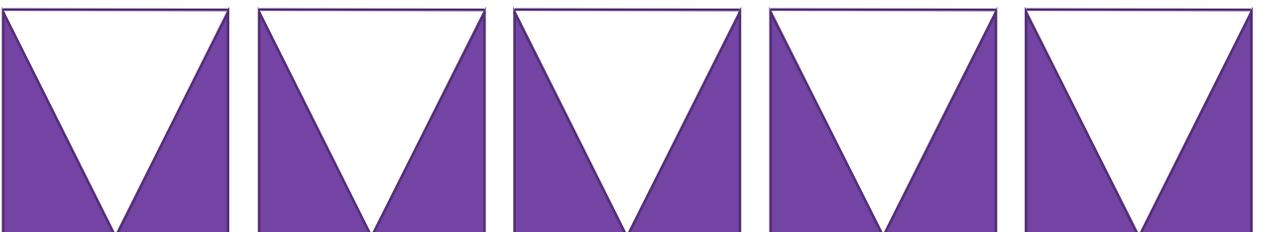
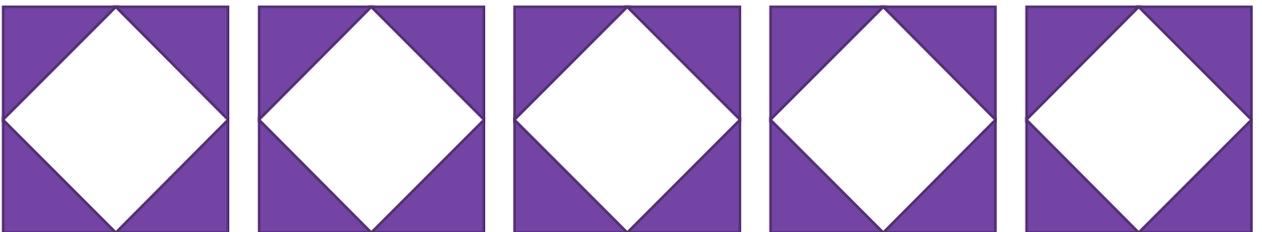
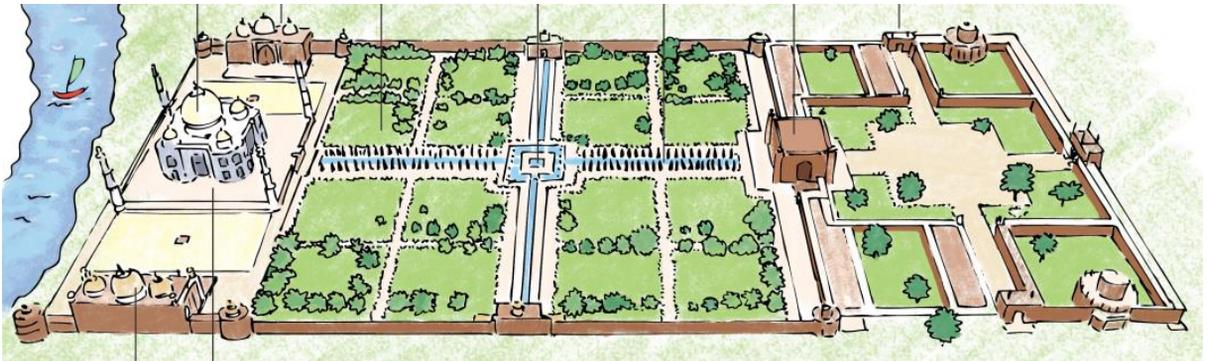
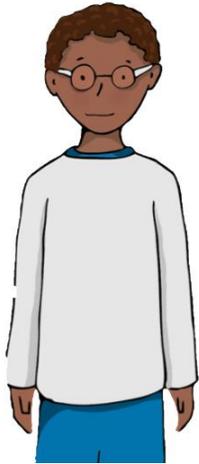
Activity: Composing shapes

Squares and equilateral triangles have been used to make a pattern. How many different shapes can you find in the pattern? Shade some in.



Write the names of the shapes you found.
What can you write about each shape?

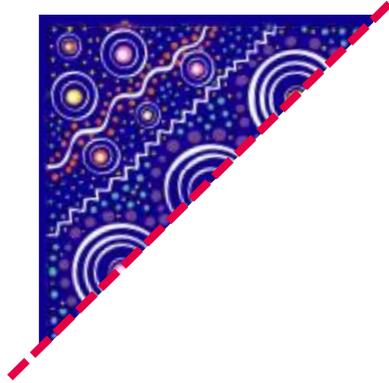
Pack 15 Session C
Talk Task: Reflection symmetry



Pack 15 Session C

Activity: Reflection symmetry

1) Complete the other side of the symmetrical images.



2) Draw on the lines of symmetry onto these flags. Ignore the colours.



SOUTH AFRICA

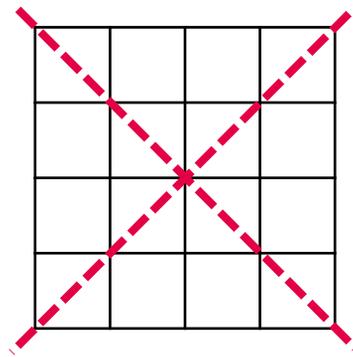
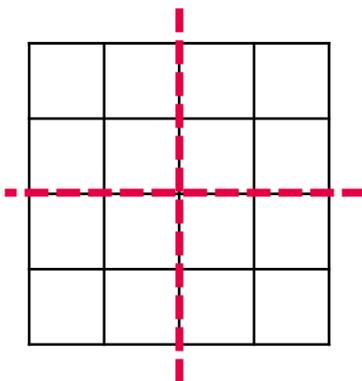
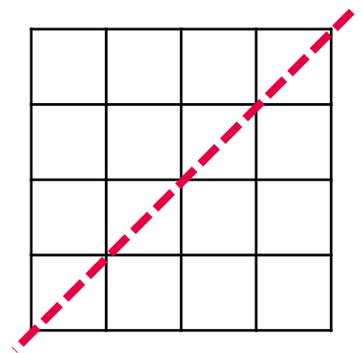
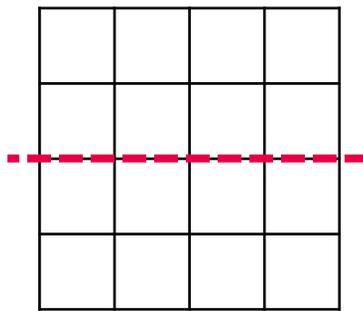
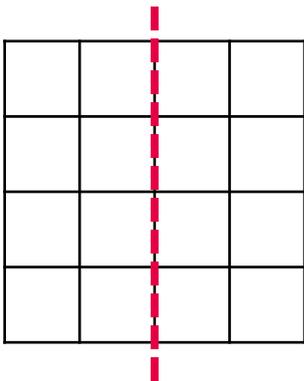


MAURITIUS



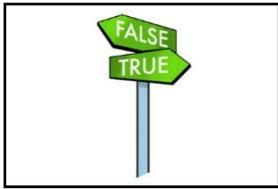
TANZANIA

3) Shade in parts of the grids to make patterns with given lines of symmetry.

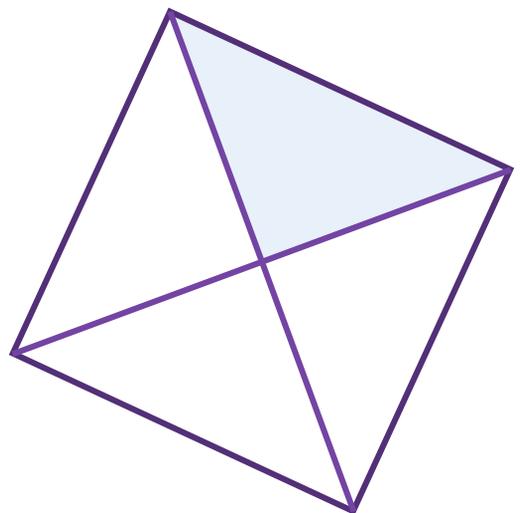
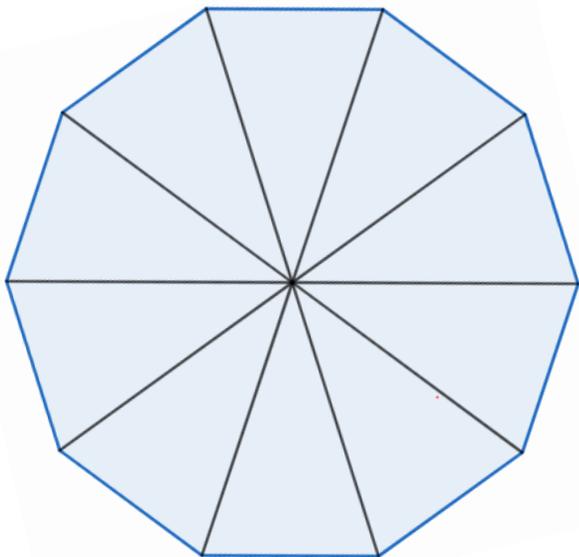
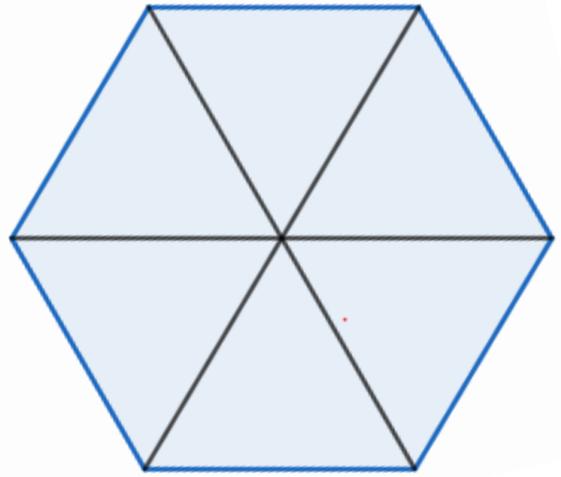
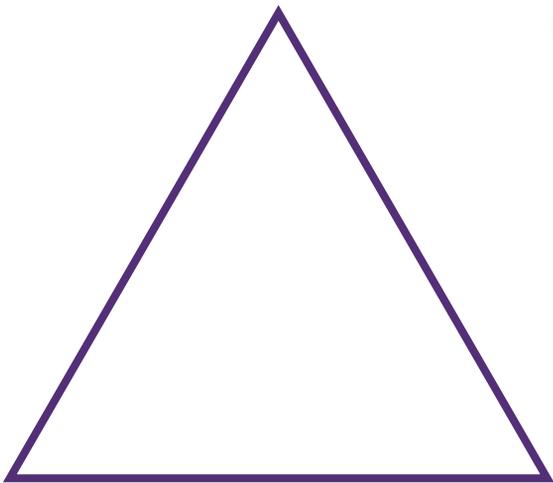


Pack 15 Session D

Talk Task: Symmetry of regular polygons

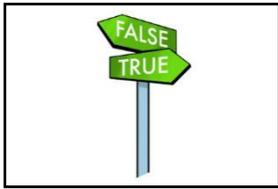


A line of symmetry always goes through a vertex.

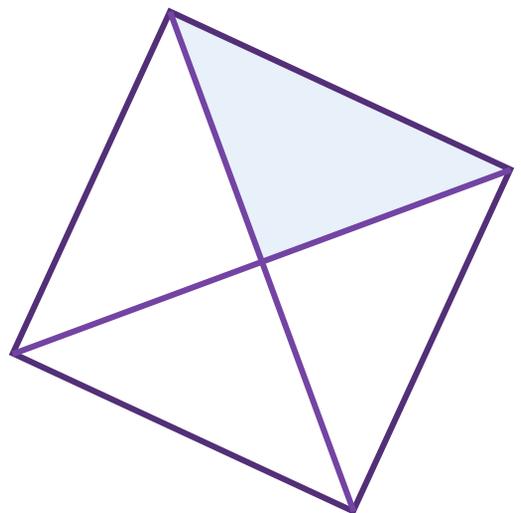
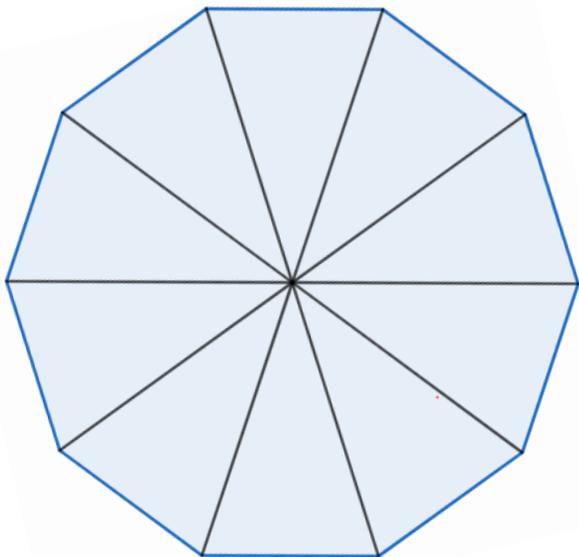
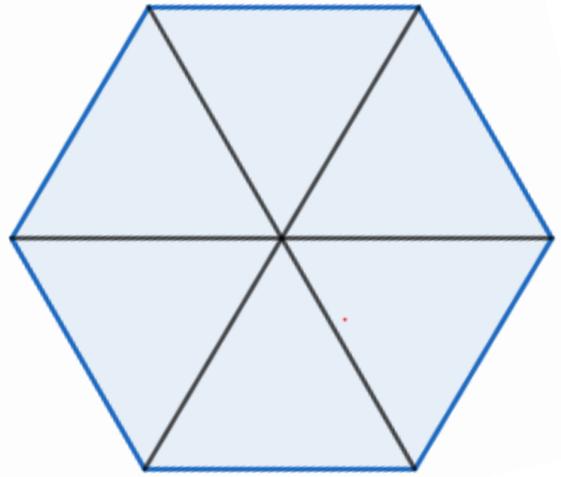
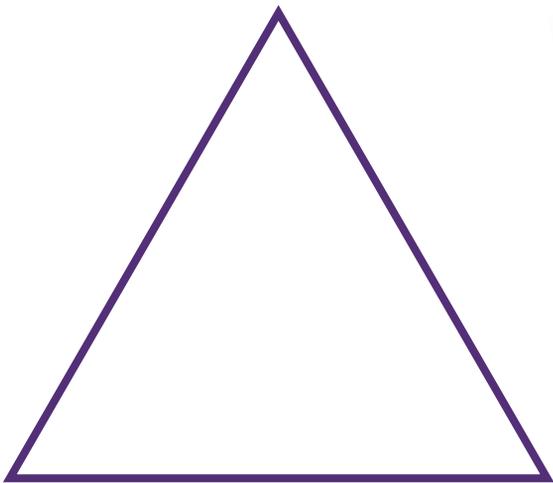


Pack 15 Session D

Talk Task: Symmetry of regular polygons



A line of symmetry always goes through a vertex.

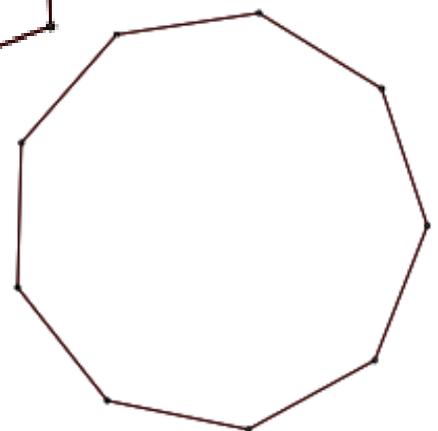
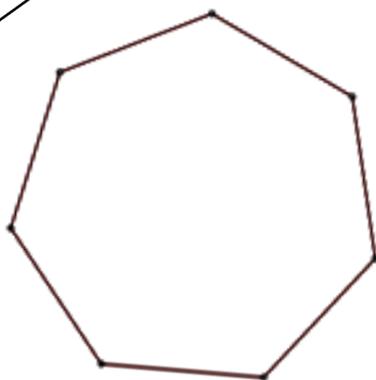
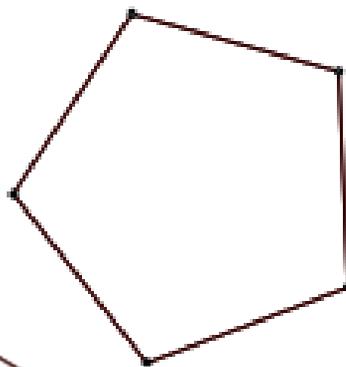
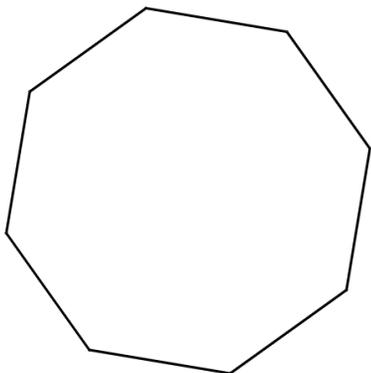


Pack 15 Session D

Activity: Symmetry of regular polygons

Complete the table with information about each regular polygon. You may wish to explore rotational symmetry. Cut out, fold and rotate the shapes to check the pattern is correct.

Regular polygon	Number of sides	Number of lines of symmetry	Rotational symmetry of order ...
Triangle			
Quadrilateral (square)			
Pentagon			
Hexagon			
Heptagon			
Octagon			
Nonagon			
Decagon			



At home materials

Pack 16: Triangles and quadrilaterals

Session A) Creating triangles

Session B) Describing triangles

Session C) Creating quadrilaterals

Session D) Describing quadrilaterals

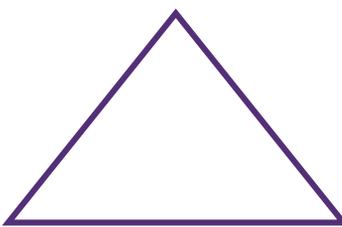
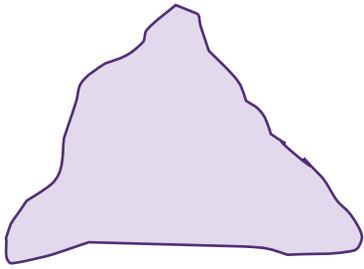
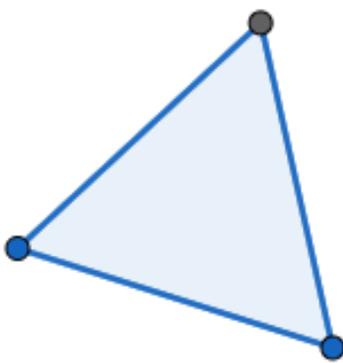
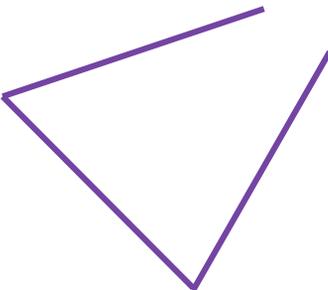
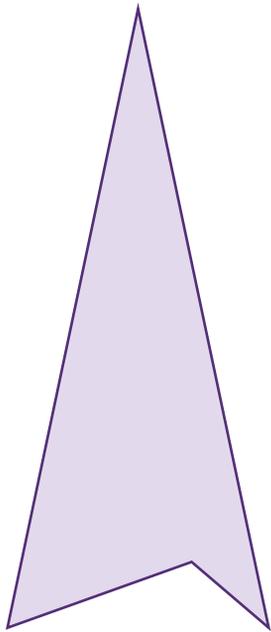
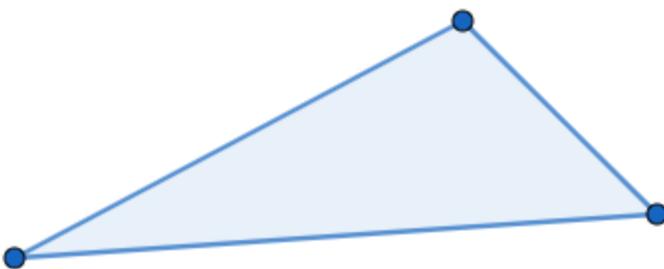


Pack 16 Session A

Talk Task: Creating triangles

 always
 sometimes
 never

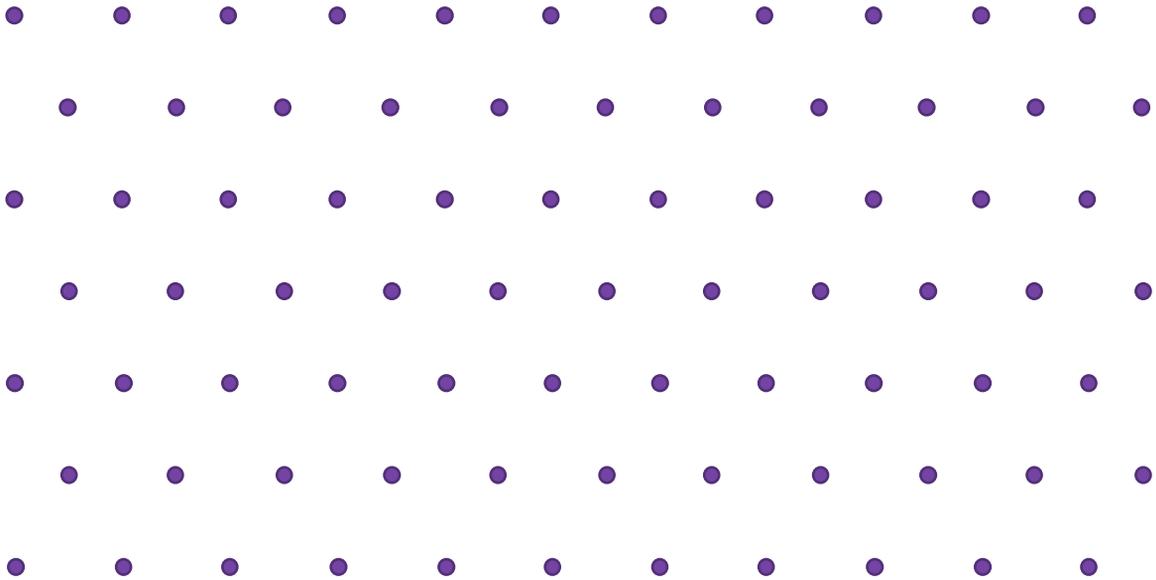
Joining three points with straight lines will form a triangle

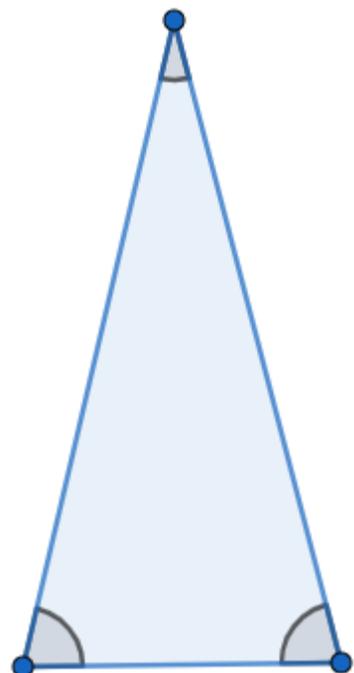
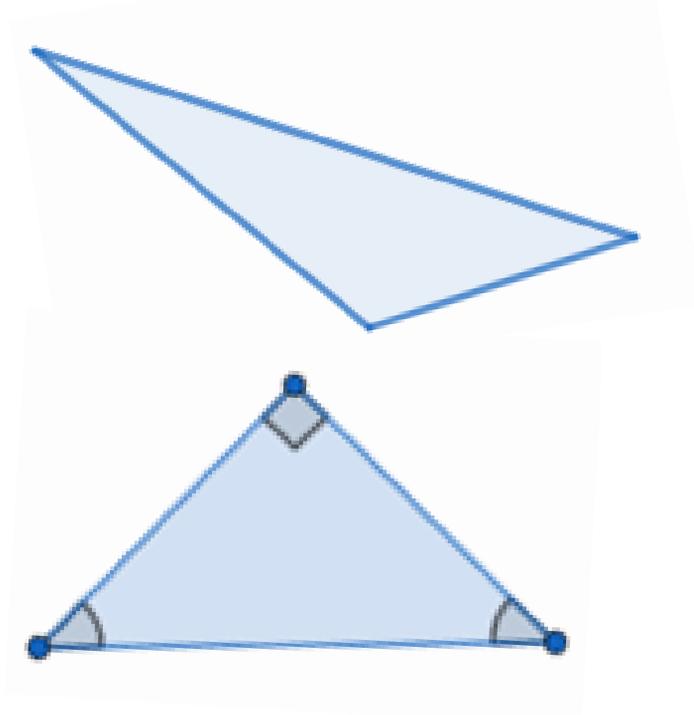
Pack 16 Session A

Activity: Creating triangles

- 1) Use a ruler to join dots to create triangles. How many different ones can you make?

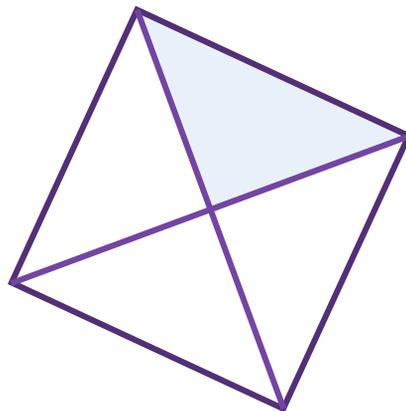
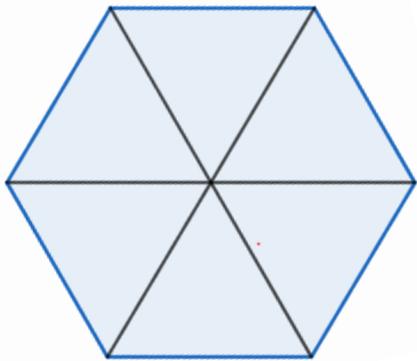
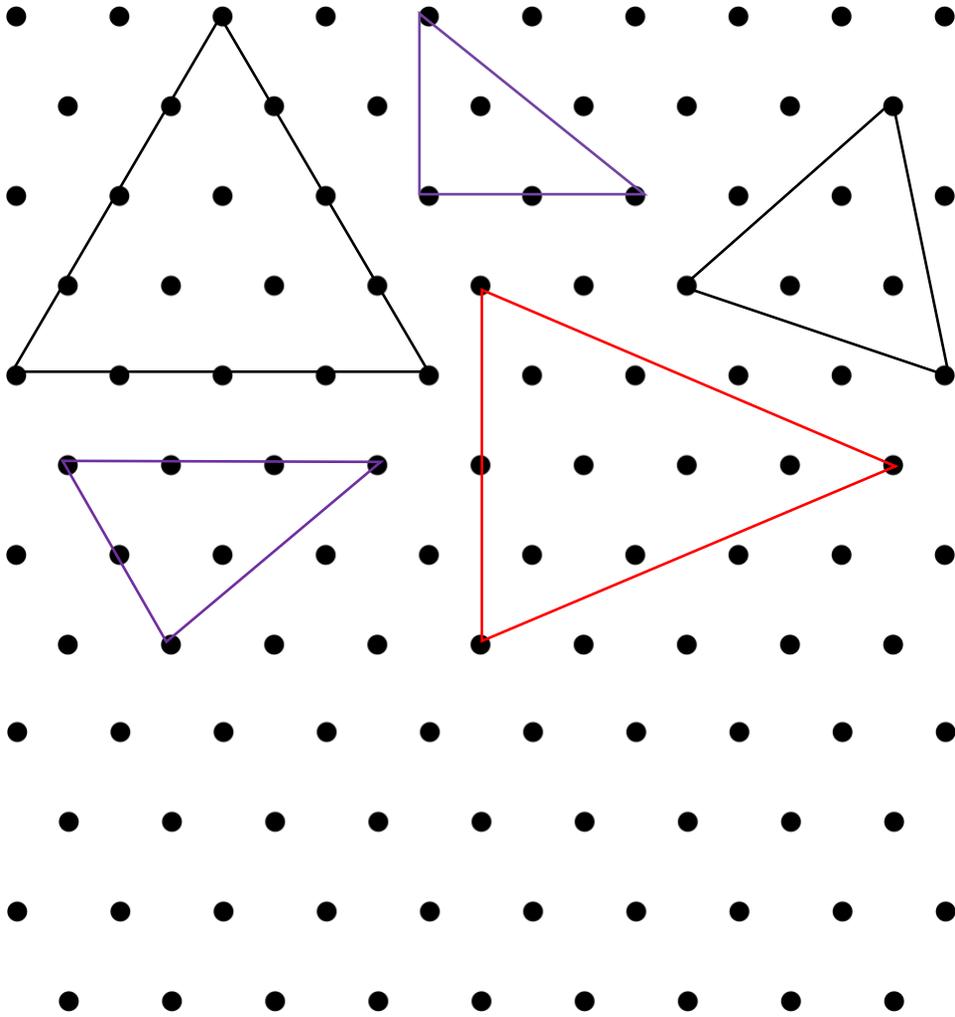


- 2) Describe the angles as acute, obtuse or right angle.



Pack 16 Session B

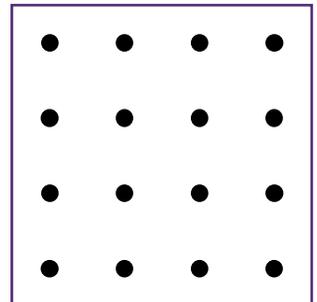
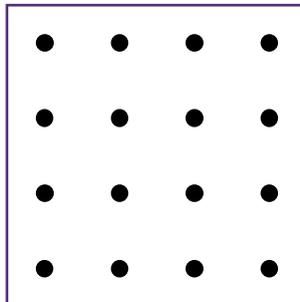
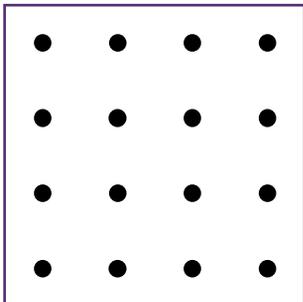
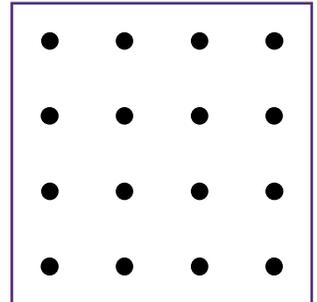
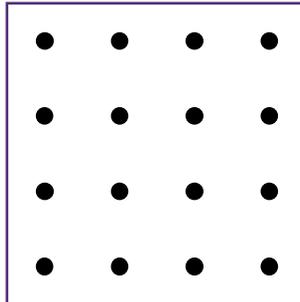
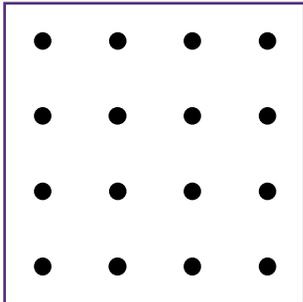
Talk Task: Describing triangles



Pack 16 Session B

Activity: Describing triangles

- 1) Join dots to make different triangles. Write isosceles or scalene to describe each triangle.

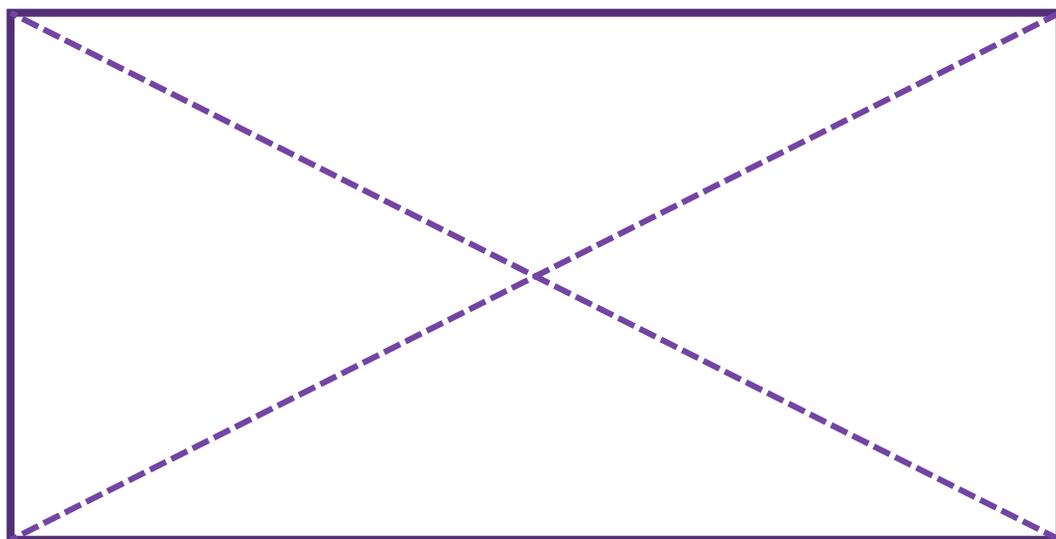
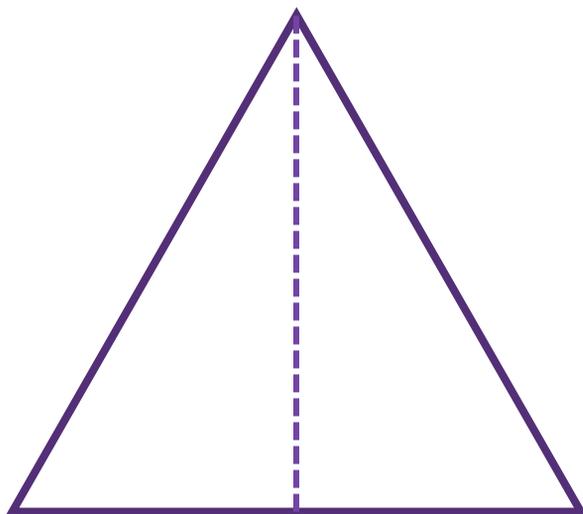
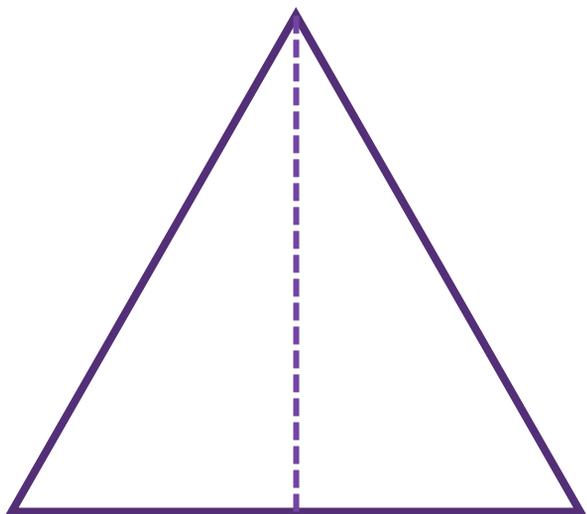


- 2) Try to draw a triangle for each section of the table.

	Scalene	Isosceles	Equilateral
Has a right angle			Not possible
No right angle			

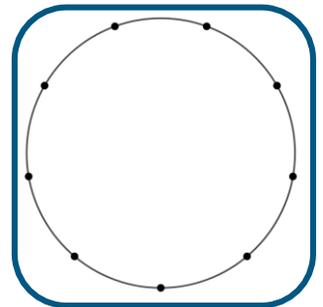
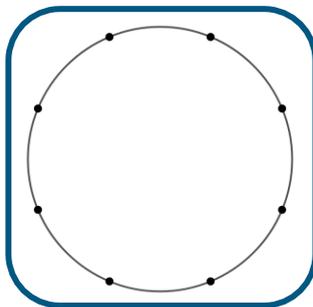
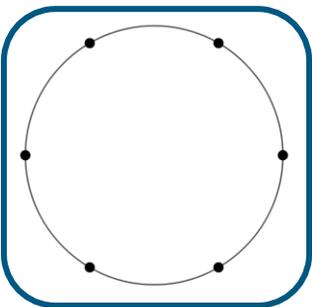
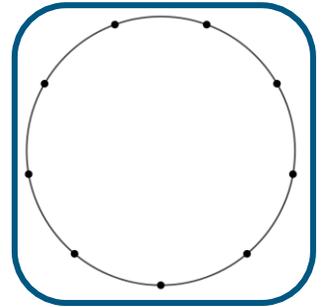
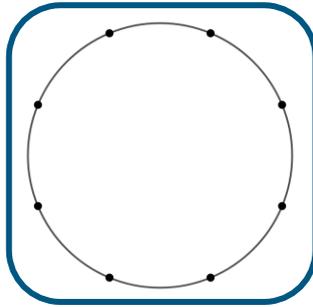
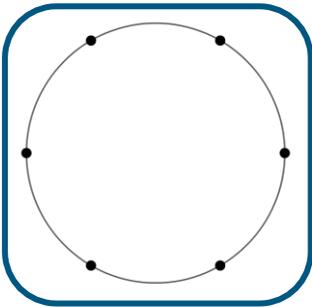
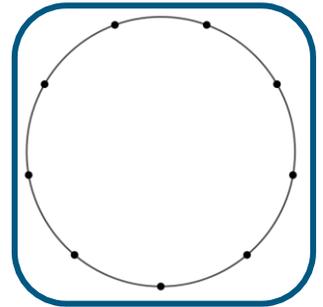
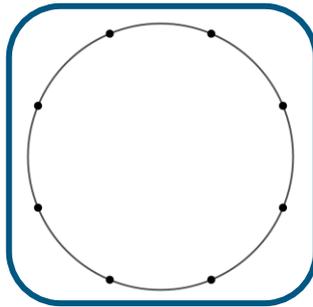
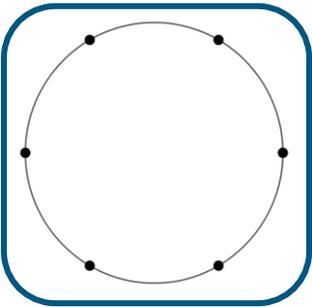
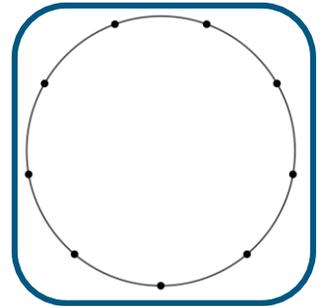
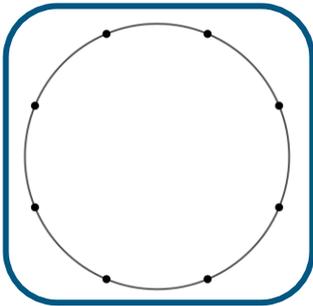
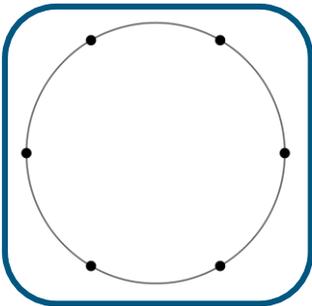
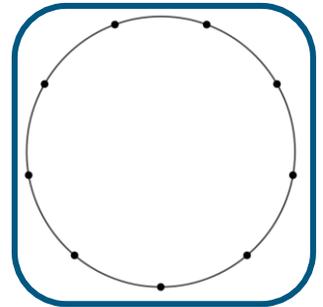
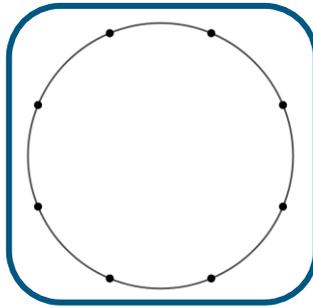
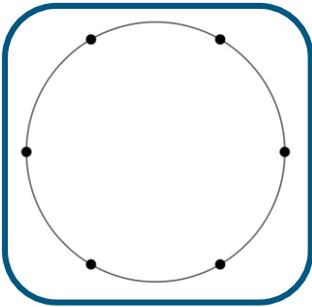
Pack 16 Session C

Talk Task: Creating quadrilaterals



Pack 16 Session C

Activity: Creating quadrilaterals



Pack 16 Session D

Talk Task: Describing quadrilaterals

A rectangle has four right angles	A square has four right angles and four equal length sides
A parallelogram has two pairs of parallel sides and equal opposite angles	A rhombus is a equilateral parallelogram. It has two pairs of parallel sides that are all equal in length.
A trapezium has one pair of parallel sides	A kite has two pairs of equal length adjacent sides.



A square is a rectangle



A square is a parallelogram



A rhombus is a square



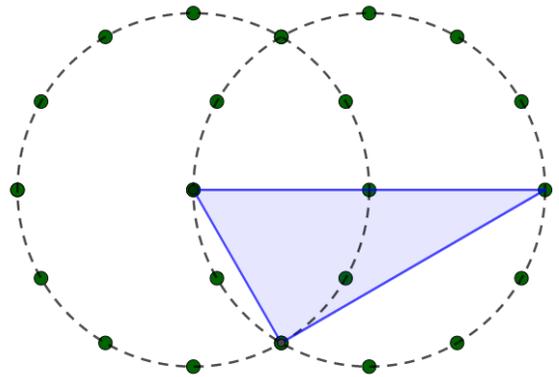
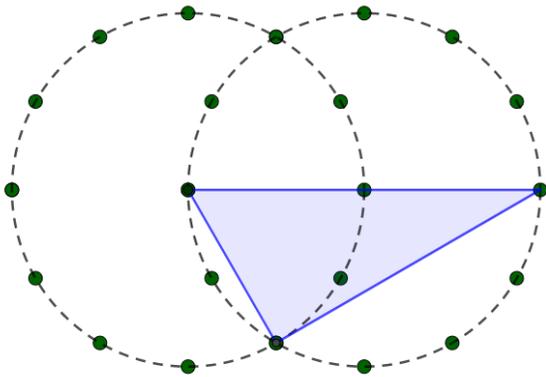
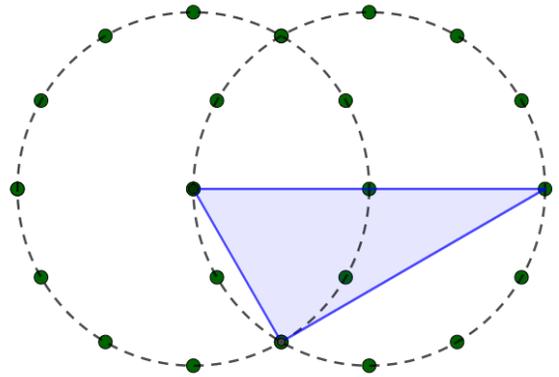
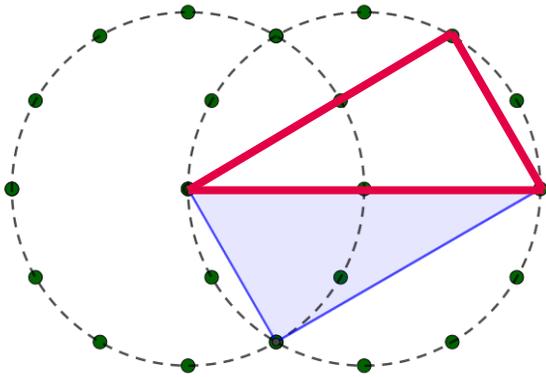
A parallelogram is a rectangle



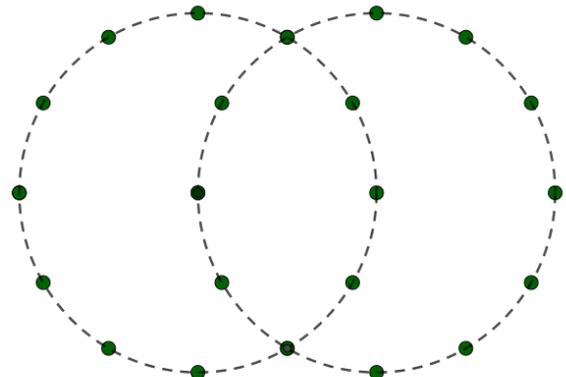
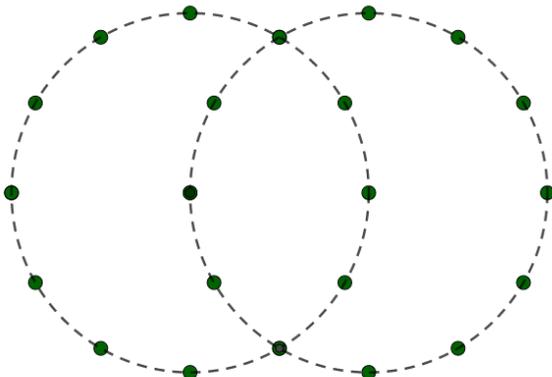
Pack 16 Session D

Activity: Describing quadrilaterals

Draw another triangle to create a quadrilateral and label with what you know. One has been done for you to label.



Build different quadrilaterals with two triangles and label with what you know.



At home materials

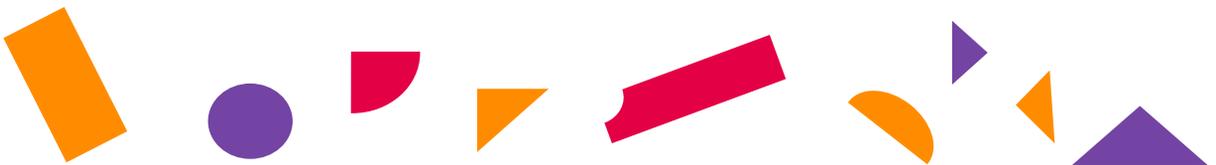
Pack T1: Time

Session A) Measuring time

Session B) Time across a day

Session C) Hour hand

Session D) Minute hand



Pack T1 Session A

Talk Task: Measuring time

day

month

second

minute

century

hour

week

fortnight

year

millennium

decade



Pack T1 Session A

Activity: Measuring time

1) Which unit of measure would you use to describe each of the following:

a) Age of an adult _____

b) Age of a baby _____

c) Length of a film _____

2) Choose something that you would measure with each of these units:

a) hours

b) weeks

c) seconds

3) Decide if each statement is true or false.

a) The half term break is longer than 4 days. True / False

b) 15 days is shorter than a fortnight. True / False

c) The summer holidays are longer than 3 weeks True / False

d) Half a year is shorter than a school term True / False

Write a true statement and a false statement:

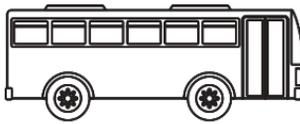


Pack T1 Session B

Talk Task: Time across a day

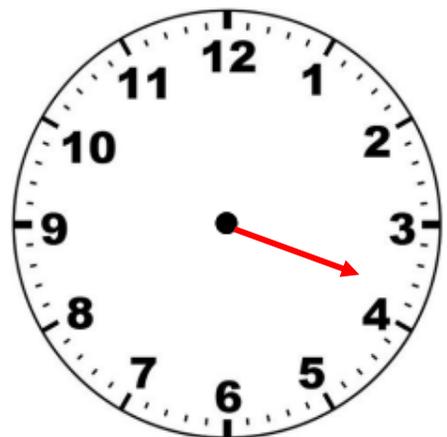
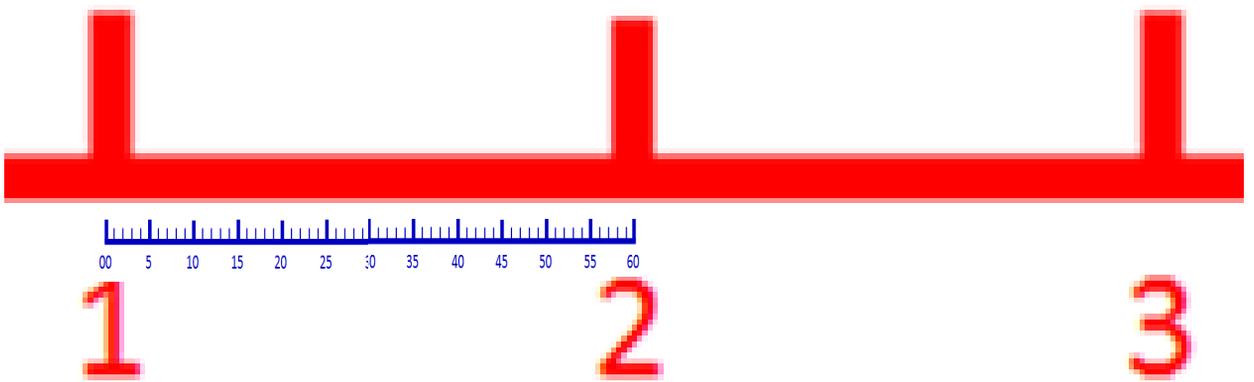
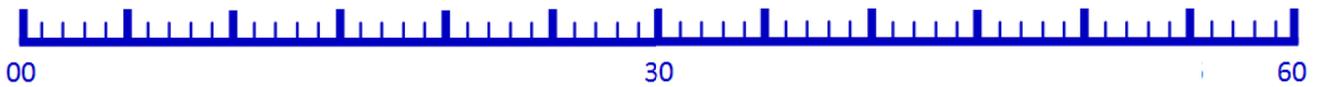
This is my day



	6:00 am	
	7:00 am	
	8:00 am	
	9:00 am	
	10:00 am	
	11:00 am	
	12:00 pm	
	1:00 pm	
	2:00 pm	
	3:00 pm	
	4:00 pm	
	5:00 pm	
	6:00 pm	
	7:00 pm	
	8:00 pm	
	9:00 pm	
	10:00 pm	

Pack T1 Session C

Talk Task: Hour hand



Pack T1 Session C
Activity: Hour hand

1) Select the correct time. Where would the minute hand be?



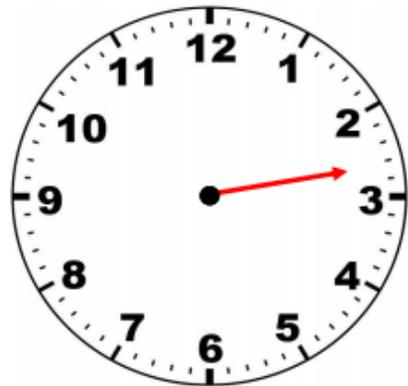
- Quarter past 10
- Half past 10
- Quarter to 11



- 7 o'clock
- Quarter past 7
- Quarter to 7

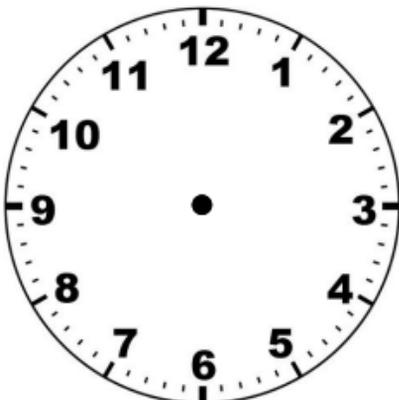


- Quarter past 1
- Half past 1
- Quarter to 2

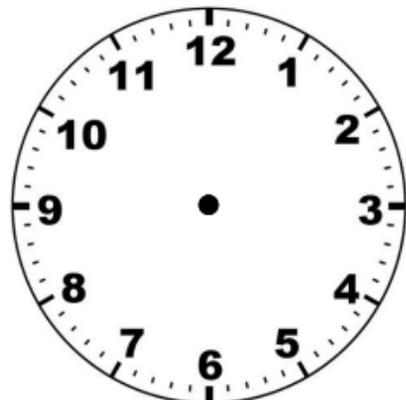


- 2:10
- 2:40
- 2:55

2) Choose where to draw the hour hand to show the given time.

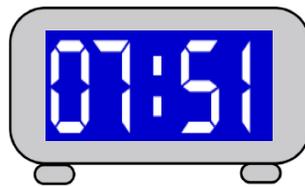
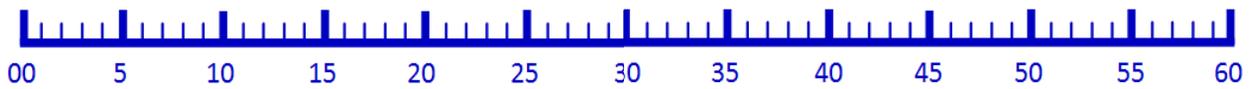
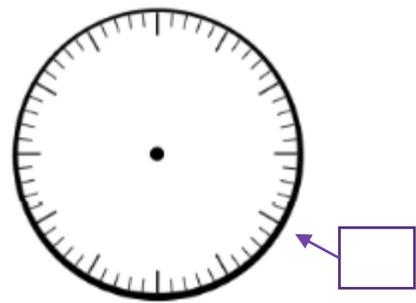
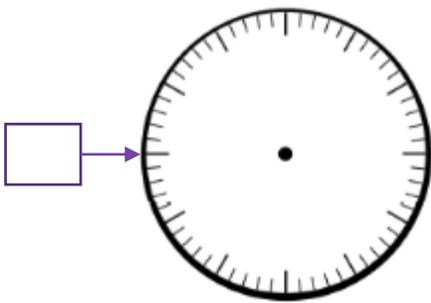
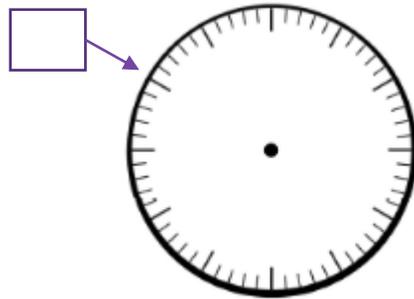
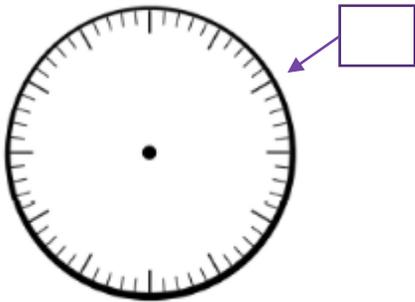


Half past 8



Ten to three

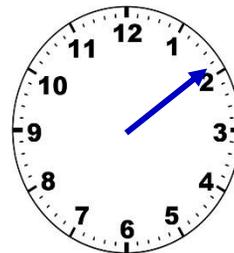
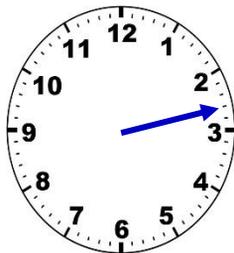
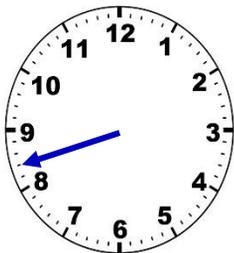
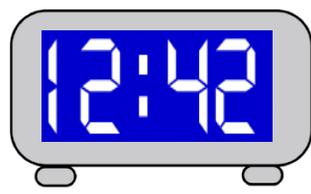
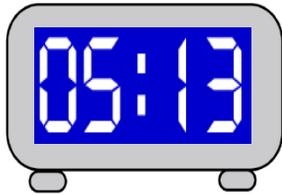
Pack T1 Session D
Talk Task: Minute hand



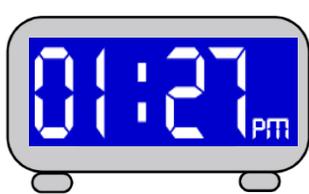
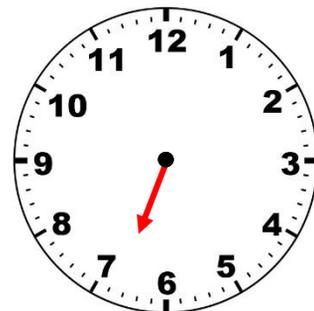
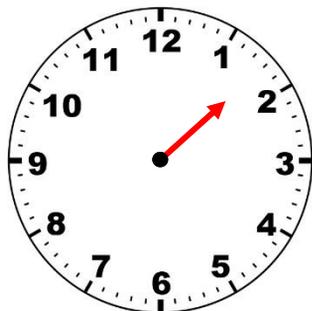
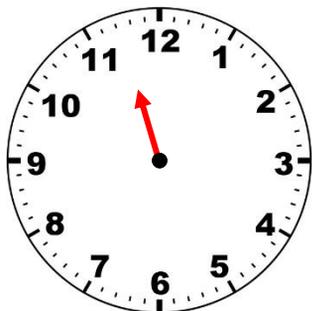
Pack T1 Session D

Activity: Minute hand

1) Match the clocks and draw in the hour hand.



2) Draw the minute hand in the correct position to show each time.



At home materials

Pack T2: Telling the time

Session A) Rewind to o'clock

Session B) Hour hand confusion

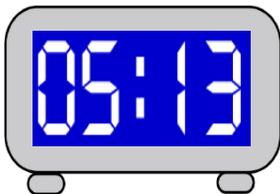
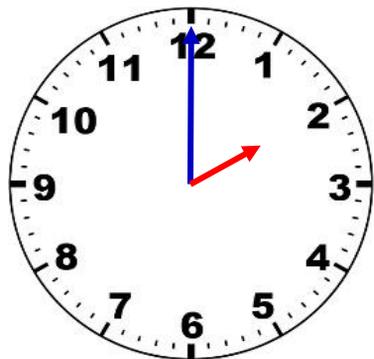
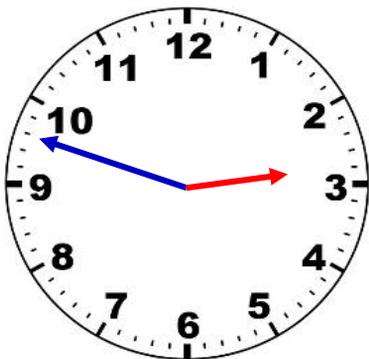
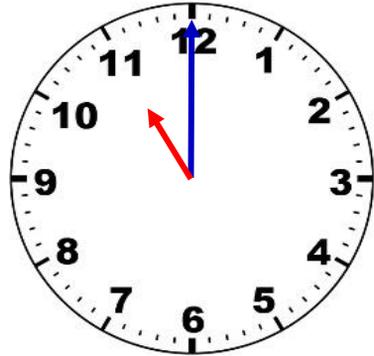
Session C) Hand mix up

Session D) Telling errors



Pack T2 Session A

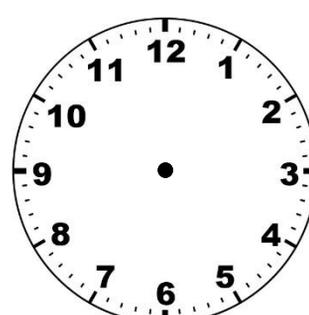
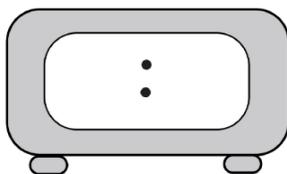
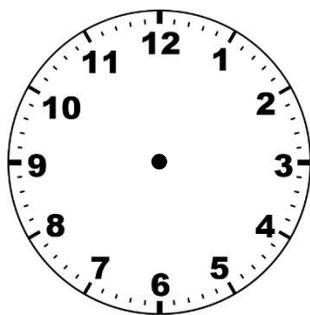
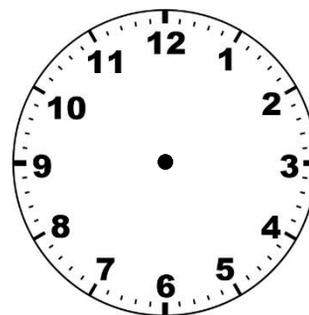
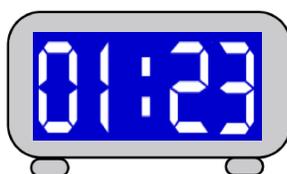
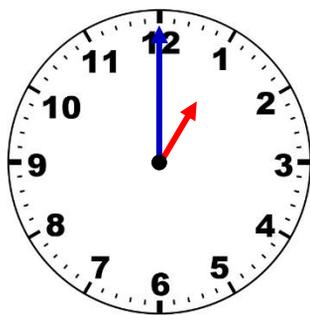
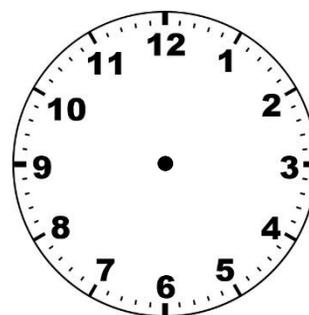
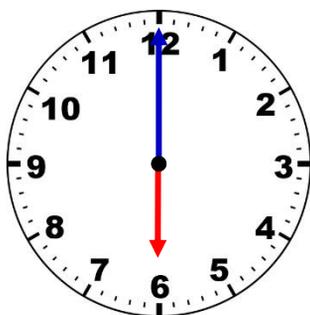
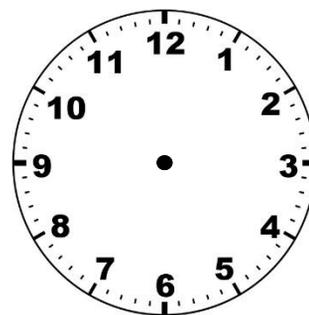
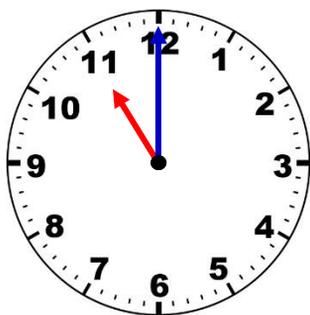
Talk Task: Rewind to o'clock



Pack T2 Session A

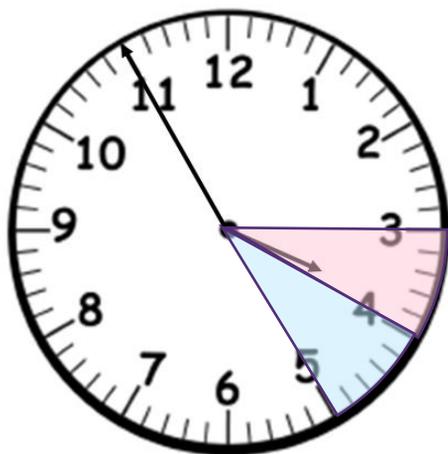
Activity: Rewind to o'clock

Use the o'clock image to draw the hands to show each time. Be precise. Then create your own example.

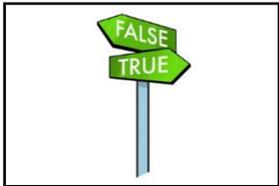


Pack T2 Session B

Talk Task: Hour hand confusion



The time is 4:55



The hour hand and minute hand are on top of each other at...

midnight

half past six

quarter to nine

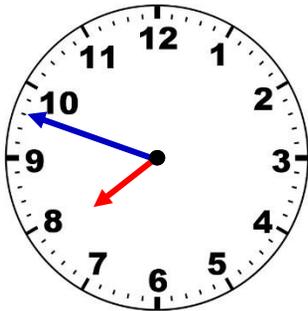
twenty past four

5:27

Pack T2 Session B

Activity: Hour hand confusion

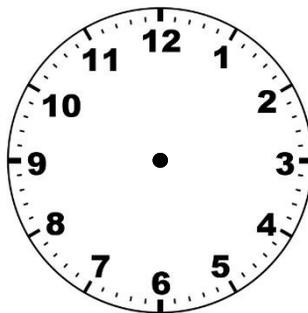
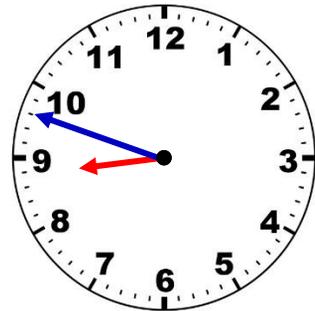
1) Which clock shows which time? Draw the hands to show the missing one.



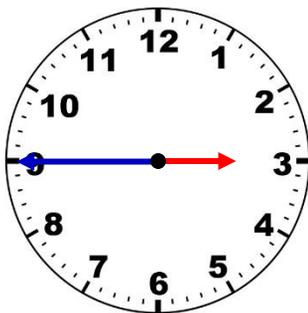
07:48

08:48

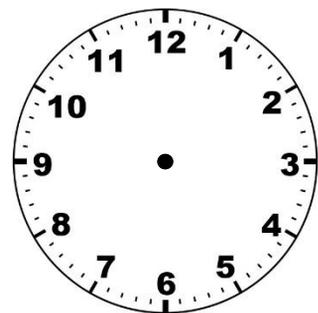
09:48



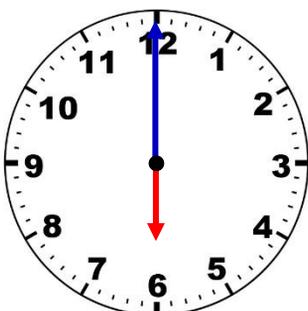
2) Correct the error



I have drawn
3:45



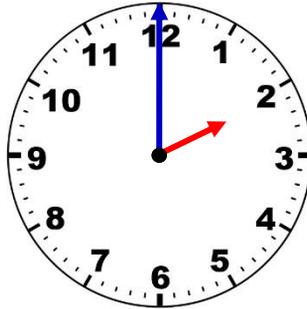
3) Find some times when the hands make a straight line.
e.g. six o'clock



Pack T2 Session C
Talk Task: Hand mix up

Ten past
twelve

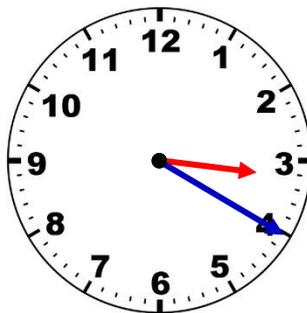
12:10



Two o'clock

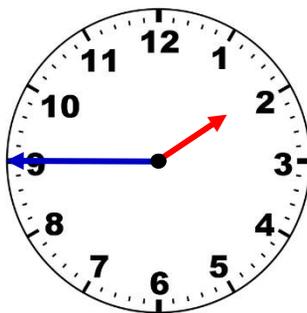
2:00

Twenty past
three



Quarter past
four

Quarter to
two



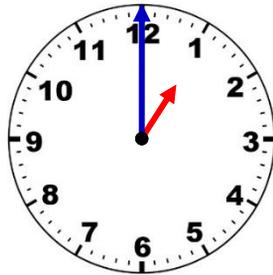
Ten past
nine

Pack T2 Session C

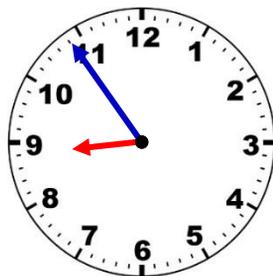
Activity: Hand mix up

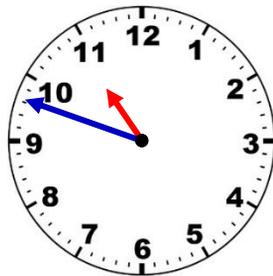
Write the time each clock shows and the time you would think it shows if you mixed up the hour and minute hand.

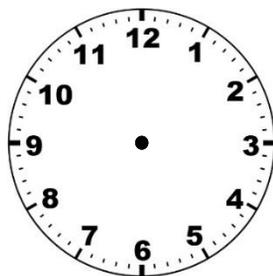
Actual time



Hand mix up time

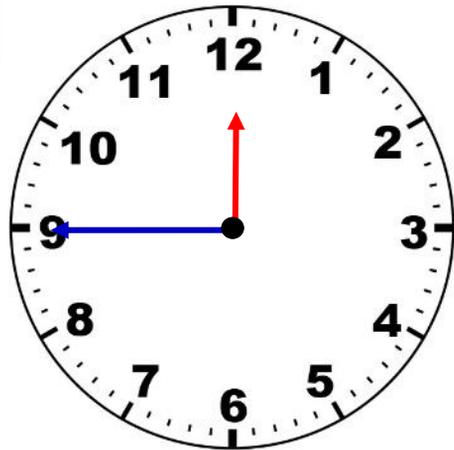
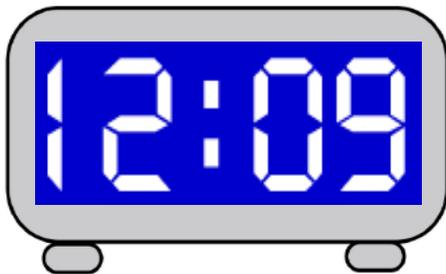




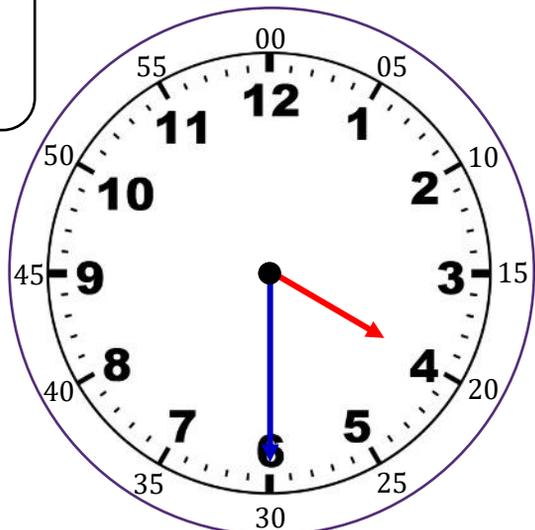
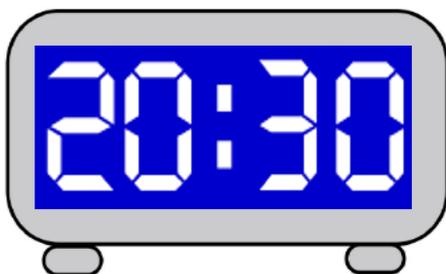


Pack T2 Session D
Talk Task: Telling errors

There is a
12 and a 9



There is a
20 and a 30

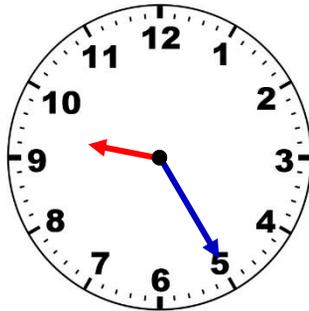


Pack T2 Session D

Activity: Telling errors

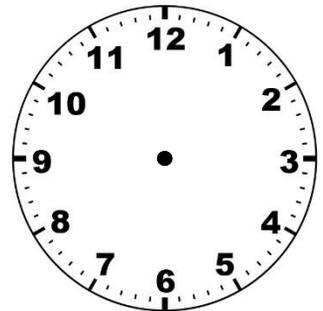
Errors have been made reading the clock. Write the time each clock shows then draw the hands to show what the incorrect time looks like

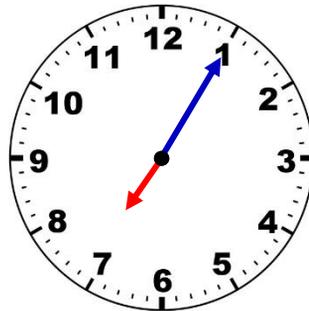
Actual time



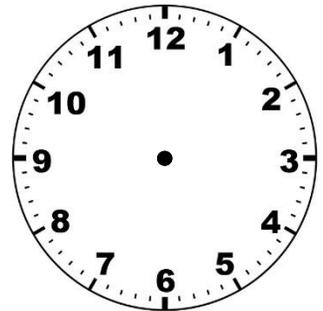
It's five past nine

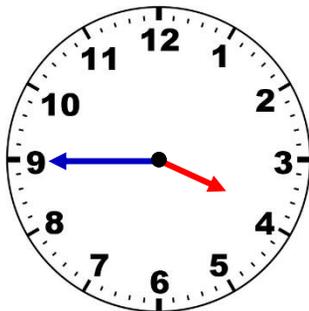
The incorrect time





It's one past seven





It's nine to four

