Name:

Maths Assessment Year 5 Term 3: Geometry

Properties of Shapes

1. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.

2. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.

3. Draw given angles, and measure them in degrees.

4. Identify: angles at a point and one whole turn; angles at a point on a straight line and a turn; other multiples of 90°.

5. Use the properties of rectangles to deduce related facts and find missing lengths and angles.

6. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Position and Direction

1. Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.
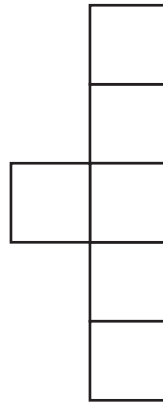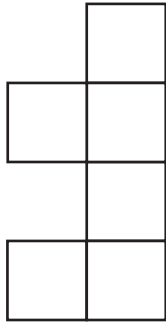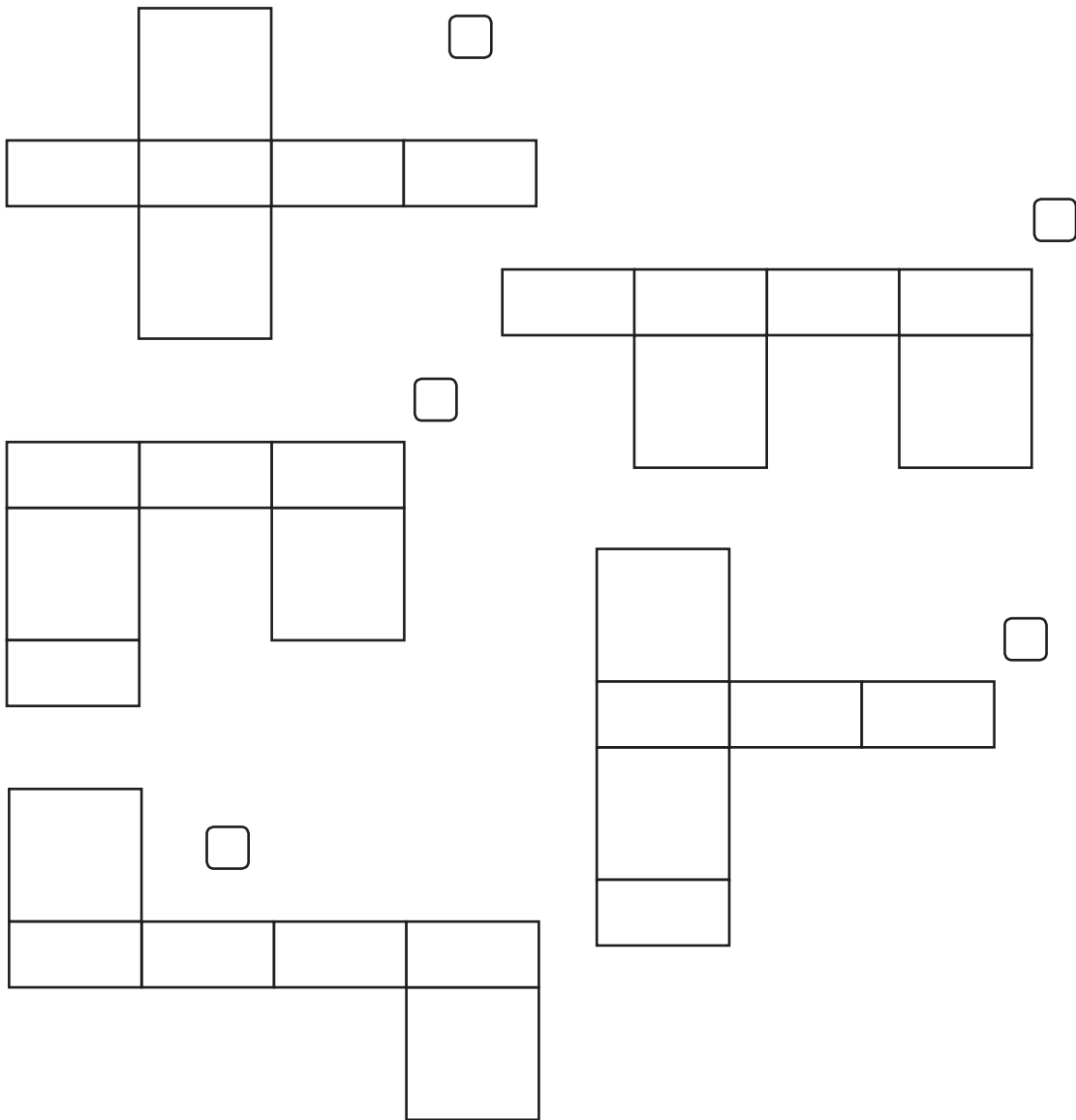
Maths Assessment Year 5 Term 3: Geometry - Properties of Shapes

1. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.

a) Move one square on these nets so that they will make a cube:
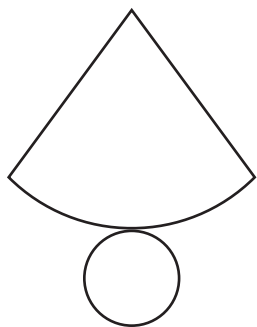
2

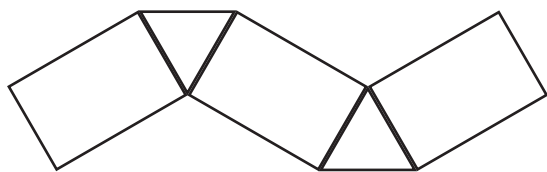**b)** Tick all the nets which will fold to make a square prism:

2 marks
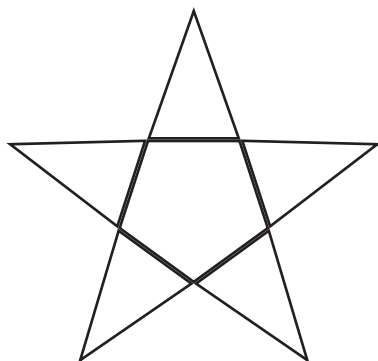
Total for
this page

c) Draw a line from the net to the shape it will create:

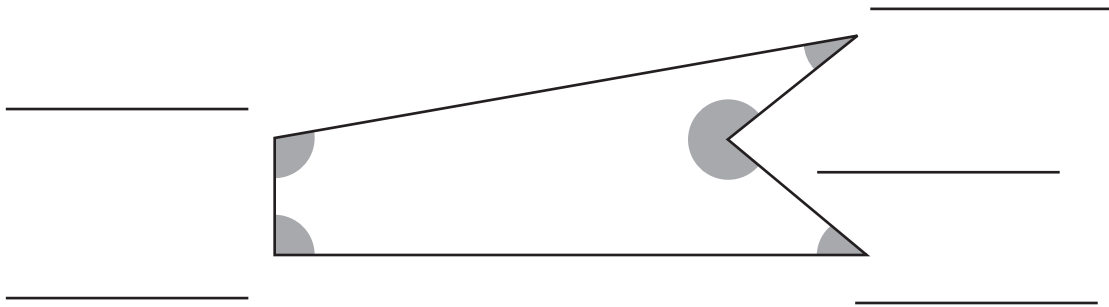Pentagonal pyramid

Cone

Triangular Prism
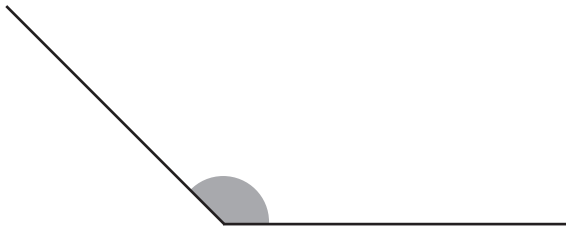
3 marks

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2. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.

a) In this shape label each angle acute, obtuse, right angle and reflex:
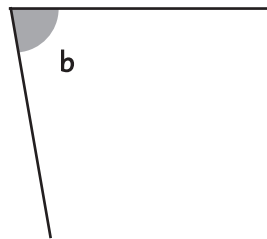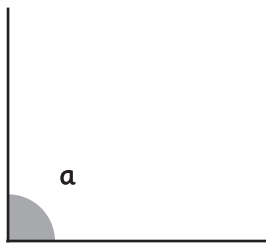
_____

_____

_____

_____

_____

b) Estimate the size of this angle. Answer to the nearest 10^0. Do not use a protractor or an angle measurer:

c) Order these angles from smallest to largest. Do not use a protractor or angle measurer:

a

b

c

Smallest   Largest

3. Draw given angles, and measure them in degrees.

a) Using a ruler and an angle measurer (protractor), draw an angle of 138°. Draw it from either side of the line:
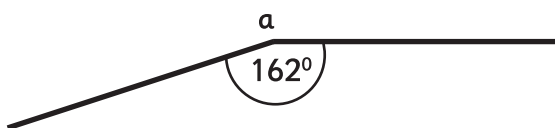
b) Using a ruler and an angle measurer (protractor), draw an angle of 54°. Draw it from either side of the line:

4. Identify: angles at a point and one whole turn; angles at a point on a straight line and a turn; other multiples of 90°.

a) Calculate the size of angle A. Do not use a protractor or angle measurer:

a

162^0

Angle **a** =

b) Calculate the size of angle B. Do not use a protractor or angle measurer:
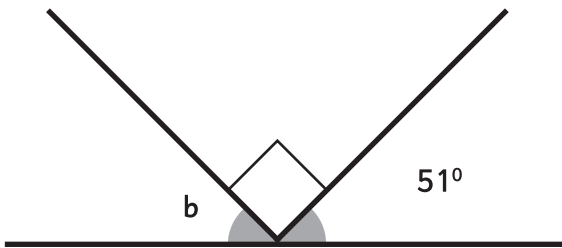
51⁰

b

Angle **b** =

5. Use the properties of rectangles to deduce related facts and find missing lengths and angles.

a) In this rectangle, what is the measurement of angle **x**?

x

52°

Not drawn to scale

Angle **x** =

b) If a rectangle has a perimeter of 28 cm and an area of 40cm², what is the length and width of the rectangle?
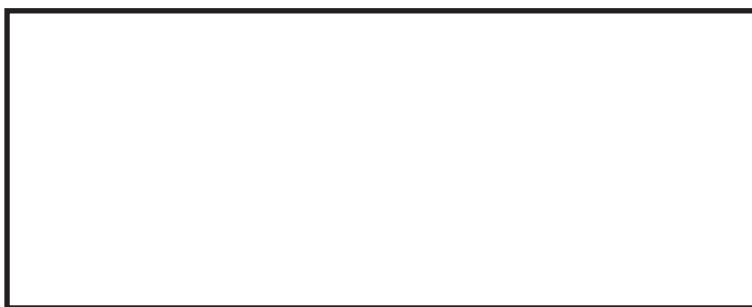
Length: _____   Width: _____

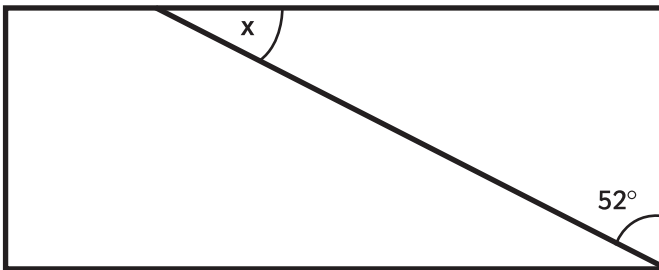**6.** Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

a) Explain why this shape is regular:

b) Name a 3D shape which all of its faces are regular 2D shapes. Name the 2D shapes that make up the faces.

Name of 3D shape: _____

Name of the faces: _____

1 mark

2 marks

Total for this page

Maths Assessment Year 5 Term 3: Geometry - Position and Direction

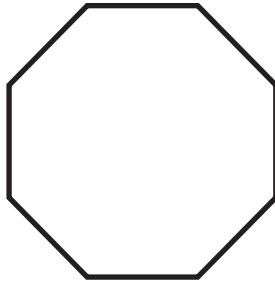**1.** Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

a) Reflect these shapes across the diagonal line of symmetry:
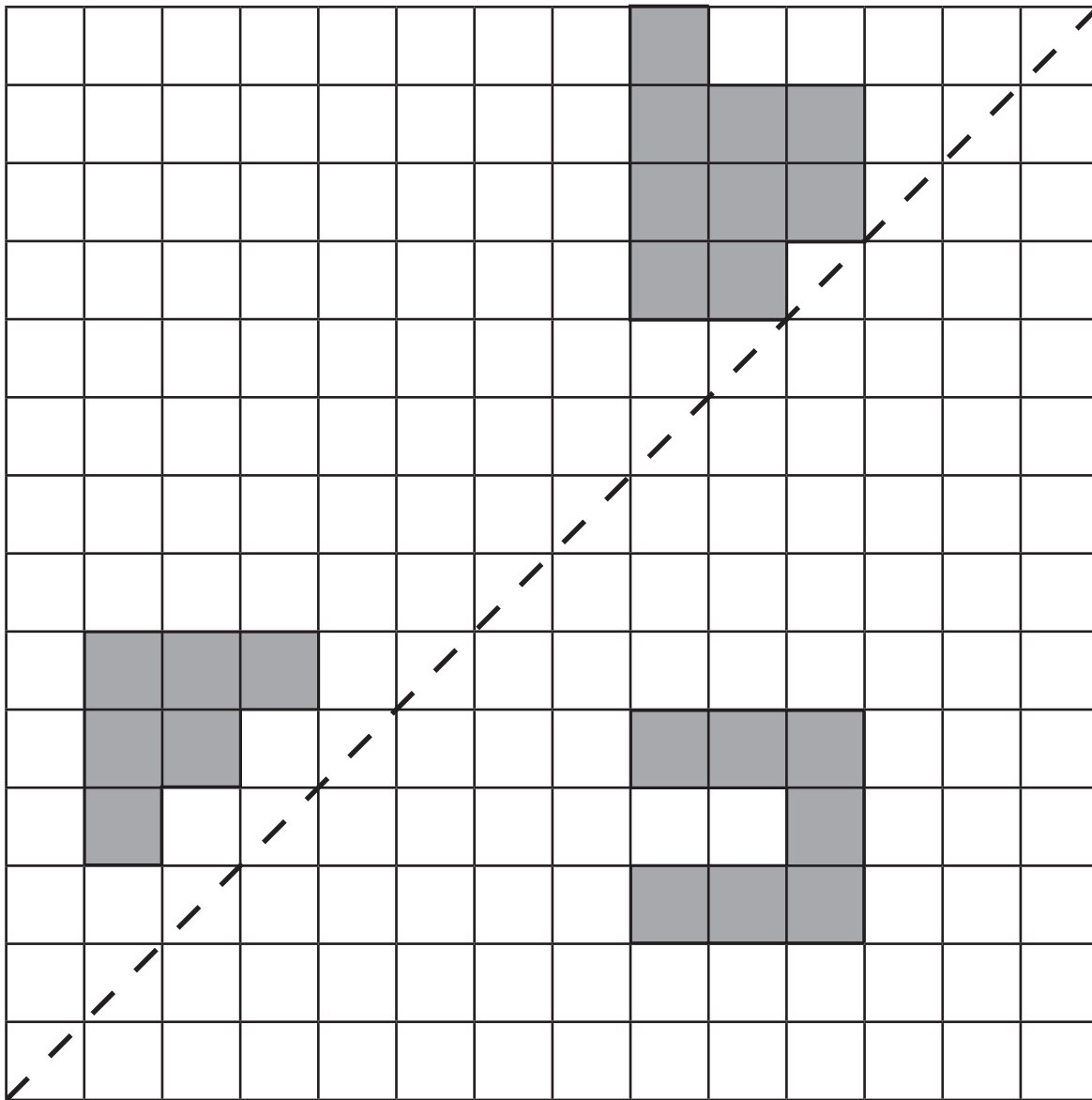
3 marks

Total for this page

b) The trapezium is translated so point A moves to (2,6). Draw the trapezium in its new position.

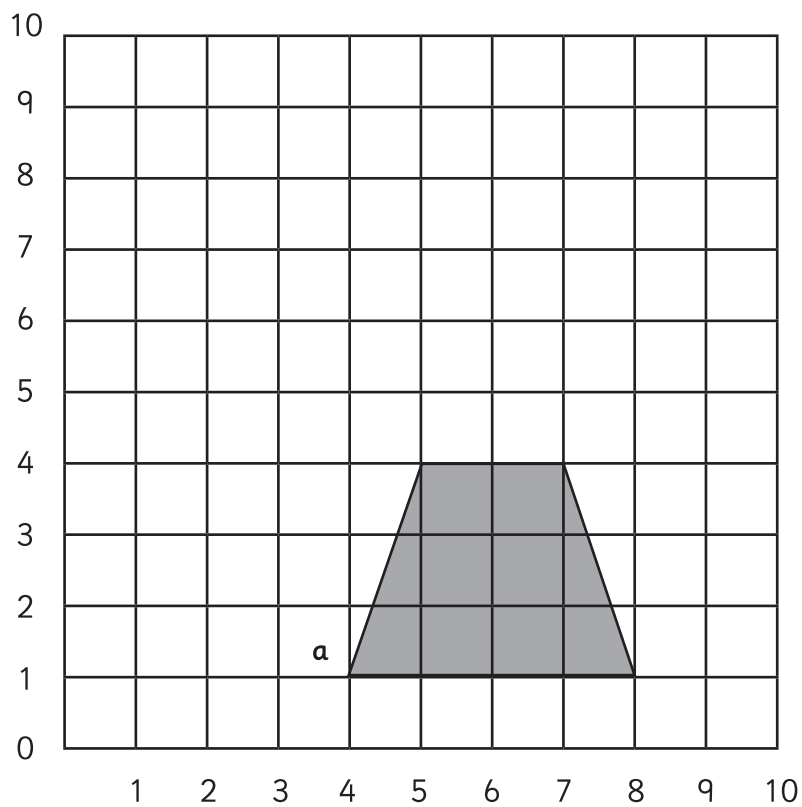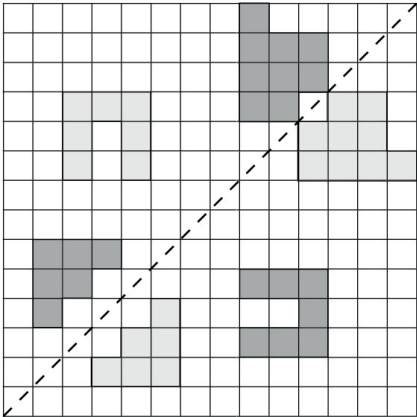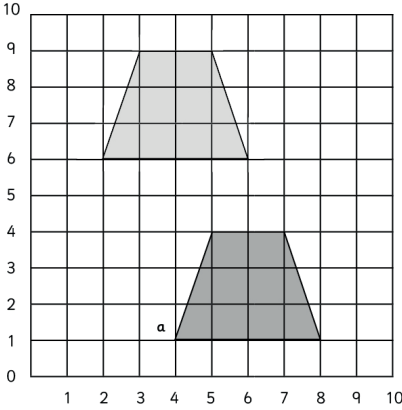| question	answer	marks	notes
1. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.			
a		2	1 mark for each correct answer. Answers other than those given which are correct are awarded the mark.
b	First and last ticked	2	2 marks if the 2 nets identified but the other not ticked Award 1 mark if 2 correct and one incorrect ticked only. Award 1 mark if only one correct ticked and no others ticked.
c		3	1 for each correct
2. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.			
a		1	1 mark for all correct
b	130⁰ or 140⁰	1	
c	B, A, C	1	

question	answer	marks	notes
3. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.			
a	Accept an angle drawn from either end within the range 136° to 140° (inclusive)	1	
b	Accept an angle drawn from either end within the range 52° to 56° (inclusive)	1	
4. Identify: angles at a point and one whole turn (total 360°); angles at a point on a straight line and a turn (total 180°); other multiples of 90°.			
a	198°	1	
b	39°	1	
5. Use the properties of rectangles to deduce related facts and find missing lengths and angles.			
a	38⁰	1	
b	Length 10cm, Width 4cm	2	1 mark for an answer that meets one criteria (area or perimeter), but not the other.
6. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles:			
a	The sides are all equal and the angles are all equal.	1	1 mark for both properties.
b	Possible answers: Cube (all squares) Tetrahedron (all equilateral triangles) Square based pyramid (square and equilateral triangles) Icosahedron (all equilateral triangles)	2	1 mark for naming the 3D shape and 1 mark for naming the shapes of the regular faces. Accept other correct answers.

Answer Sheet: Maths Assessment Year 5: Geometry - Position and Direction

question	answer	marks	notes
1. Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.				
a		3	White shapes show the reflected positions
b		2	2 marks for correct answer. 1 mark for a shape with 1 corner on (2,6)
		Total 25	