

Mathletics

Series



Teacher



Geometry



Series B – Geometry

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Series Author:

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Series B – Geometry

Page 1

1a, b Answers will vary.

Page 2



1 Teacher check.

2 yes; no; yes
yes; no; no; yes

3 Answers will vary.
Students may notice that squares have 4 straight sides; all equal sides; and 4 right angled vertices.

Page 3

What to do

a  square  rectangle



b Students may notice that: both have 4 sides; the opposite sides are equal; and sides are straight.

c A rectangle has 2 long sides.
A square is the same length on all sides.

What to do next

Teacher check.

Page 4

a  circle  oval

b Observe students.

c They are both round and neither has vertices.

d The oval is longer.









2 Teacher check.

Page 5

1 Teacher check.

Students may say triangles have 3 sides and 3 vertices.

2

| | | | |
|---|---|---|---|
|  |  |  |  |
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|  |  |  |  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

3 Do students recognise triangles in different orientations, with unequal sides and angles?

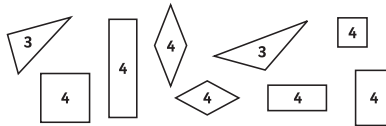
Page 6

What to do

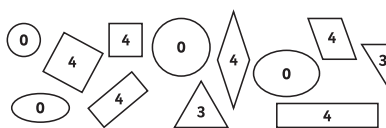
Observe students.

Page 7




1



2





3

| | Shape | Sides | Vertices |
|---|--|-------|----------|
| a | triangle  | 3 | 3 |
| b | square  | 4 | 4 |
| c | rectangle  | 4 | 4 |

Page 8

1  pentagon  hexagon

2

| | Shape | Sides | Vertices |
|---|--|-------|----------|
| a | pentagon  | 5 | 5 |
| b | hexagon  | 6 | 6 |

3a, b Answers will vary.

Page 9

What to do

Teacher check.

Do students note that triangles only have 3 vertices or angles?

What to do next

Teacher check.

Observe students.

No, circles have no vertices.

Page 10

What to do

Teacher check.

What to do next

Teacher check.

Page 11

What to do

Teacher check.

Observe students.

What to do next

Teacher check.

Observe students.

Answers will vary.

Page 12

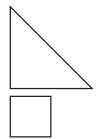
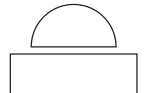
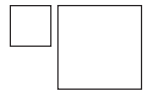
What to do

Observe students.

Page 13

What to do

Teacher check.



Page 14

What to do

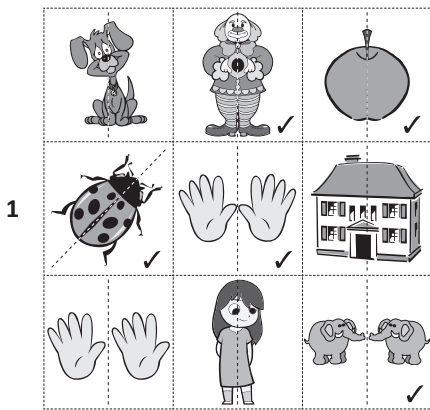
Answers will vary.

What to do next

Answers will vary.

Series B – Geometry

Page 15



Page 16

1a, b Teacher check.

2a Yes

b Teacher check.

Page 17

1 Answers will vary.

Pages 18–19

What to do

Teacher check.

Page 20

What to do

Pyramids have a point at the top where all the sides meet.

What to do next

Answers will vary.

Page 21

1 in front, inside, underneath, alongside

2a in front of

b under

c on

d faraway

e next to

f Answers will vary.

Page 22

1 Teacher check.

2 Teacher check.

3 Observe students.

Page 23

1a–g Teacher check.

Pages 24–25

1a next to

b over

c beside

d above

e under

f below

g outside

h on

i around

j through

k between

l in front

m behind

n under

o bottom

p top

Page 26

What to do

Answers will vary.

What to do next

Answers will vary.

Page 27

1a Do students see that a corner has been turned on the route?

b Students may describe a route within school such as 'This is the way to Mrs Smith's classroom'.

2 It could be along a hill path or on a winding road.

3 Students may say within a city centre.

Page 28

1 Teacher check.

2 Teacher check.

Page 29

1 Teacher check.

2 Teacher check.

Page 30

What to do

Teacher check.

Pages 31–32

What to do

Observe students.

What to do next

1a slide

b turn

c turn

d flip

e flip

f slide

2 Teacher check.

Page 33

1a half turn

b three quarter turn

c full turn

Page 34

1a clockwise

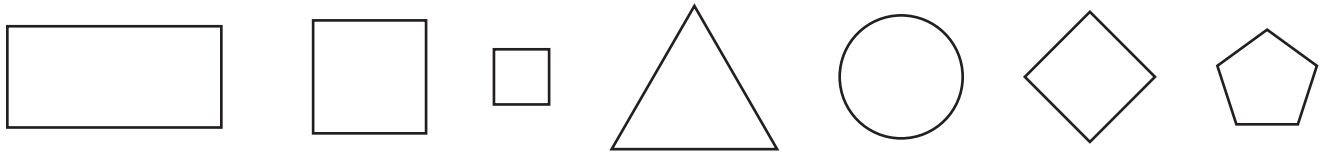
b clockwise

c anti-clockwise

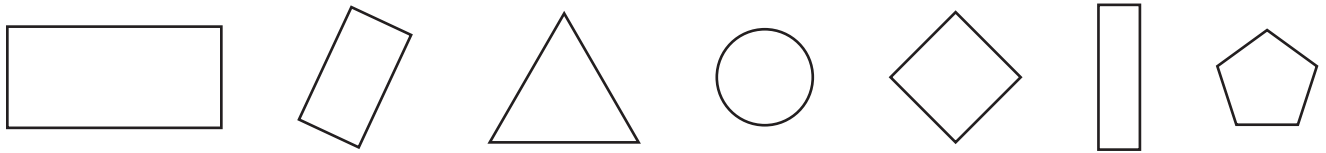
2D shape

Name _____

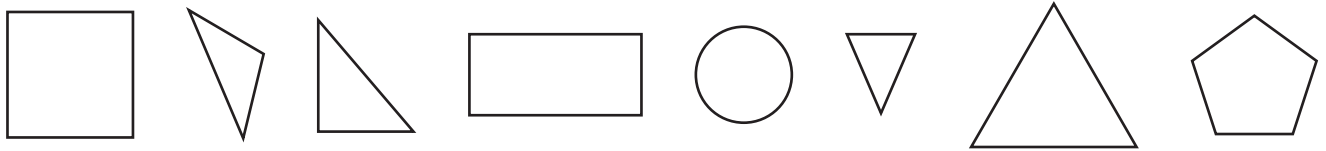
1 Colour the **squares**.



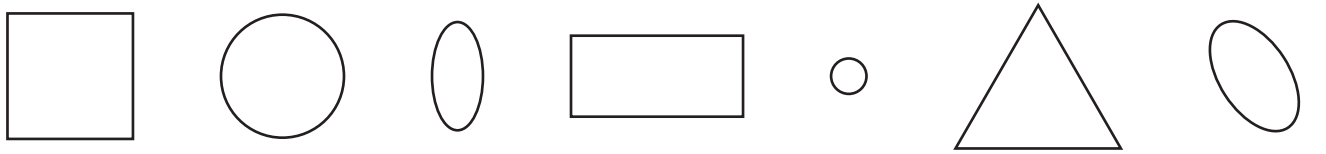
2 Colour the **rectangles**.



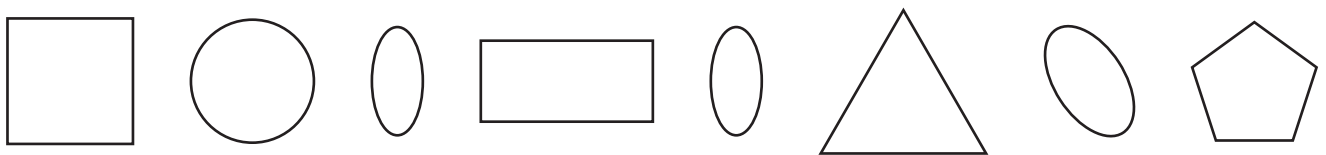
3 Colour the **triangles**.



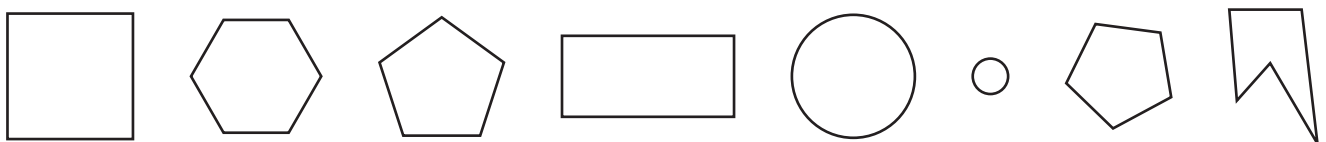
4 Colour the **circles**.



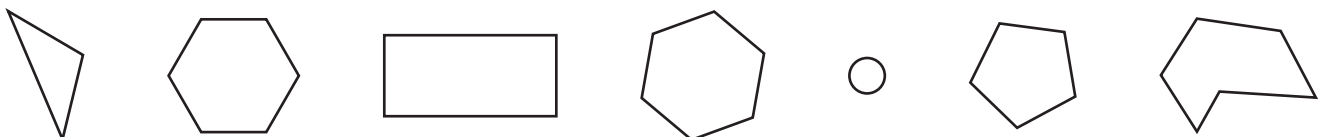
5 Colour the **ovals**.



6 Colour the **pentagons**.



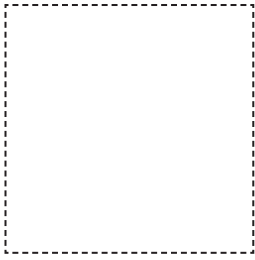
7 Colour the **hexagons**.



2D shape

Name _____

8 Look at these shapes.



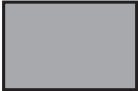


a What are some things that are **the same** about these shapes?

b What is **different** about them?

c Trace the sides. Circle any vertices.

9 How many sides and vertices?

| | Shape | Sides | Vertices |
|---|---|-------|----------|
| a | triangle  | | |
| b | square  | | |
| c | rectangle  | | |

10 Draw the other side of the picture. Make it symmetrical.



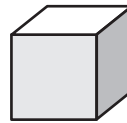
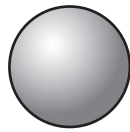
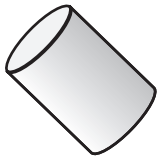
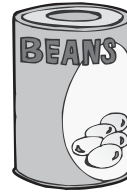
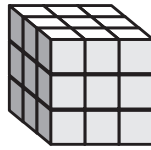
11 Draw a picture using squares, rectangles, triangles and circles.

| Skills and understandings | Not yet | Kind of | Got it |
|--|---------|---------|--------|
| <ul style="list-style-type: none"> Identifies squares, rectangles, circles, ovals, triangles, pentagons and hexagons in different orientations and environments | | | |
| <ul style="list-style-type: none"> Describes properties of shapes using everyday language | | | |
| <ul style="list-style-type: none"> Identifies sides and vertices of 2D shapes | | | |
| <ul style="list-style-type: none"> Recognises line symmetry | | | |
| <ul style="list-style-type: none"> Represents 2D shapes in different orientations and environments | | | |

3D shape

Name _____

1 Draw a line to join the object with its matching 3D shape.

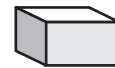


2 Circle the 3D shapes:

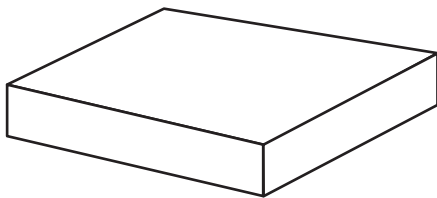
a that would **roll**



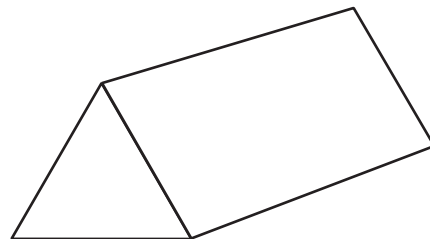
b that would **stack**



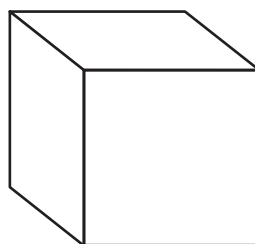
3 a Trace the **edges**.



b Circle the **vertices**.



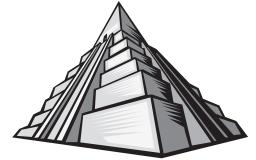
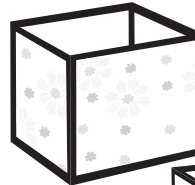
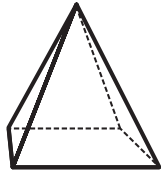
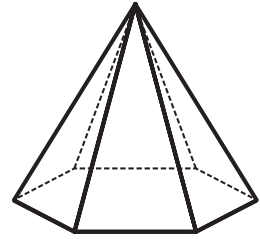
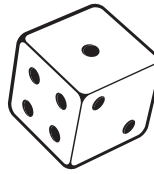
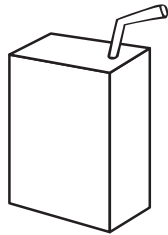
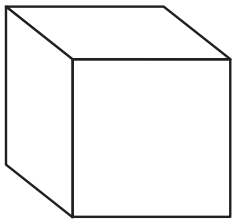
c Colour the **faces**.



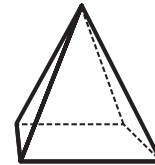
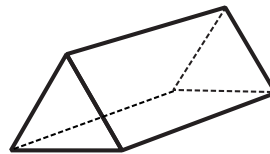
3D shape

Name _____

4 Colour the **prisms**. Circle the **pyramids**.



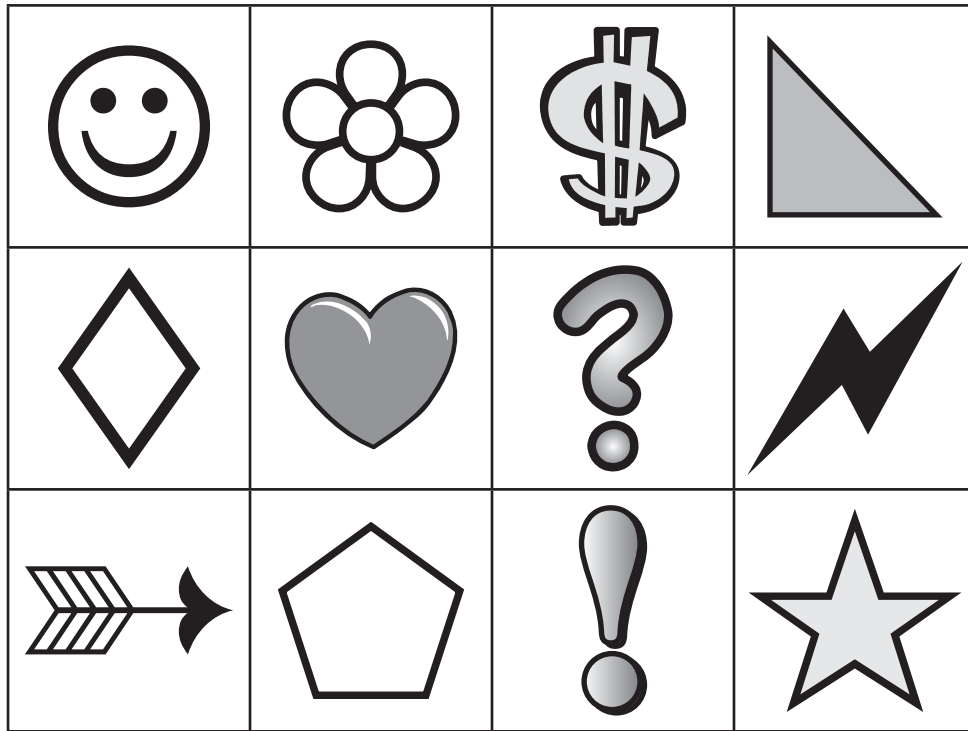
5 Look at these shapes.










a What is **the same** about these 2 shapes?

b What is **different** about these 2 shapes?

| Skills and understandings | Not yet | Kind of | Got it |
|---|---------|---------|--------|
| • Identifies and describes simple 3D shapes in a range of orientations and environments | | | |
| • Recognises which 3D shapes stack and which roll | | | |
| • Recognises and labels edges, vertices and faces | | | |
| • Identifies and compares pyramids and prisms | | | |



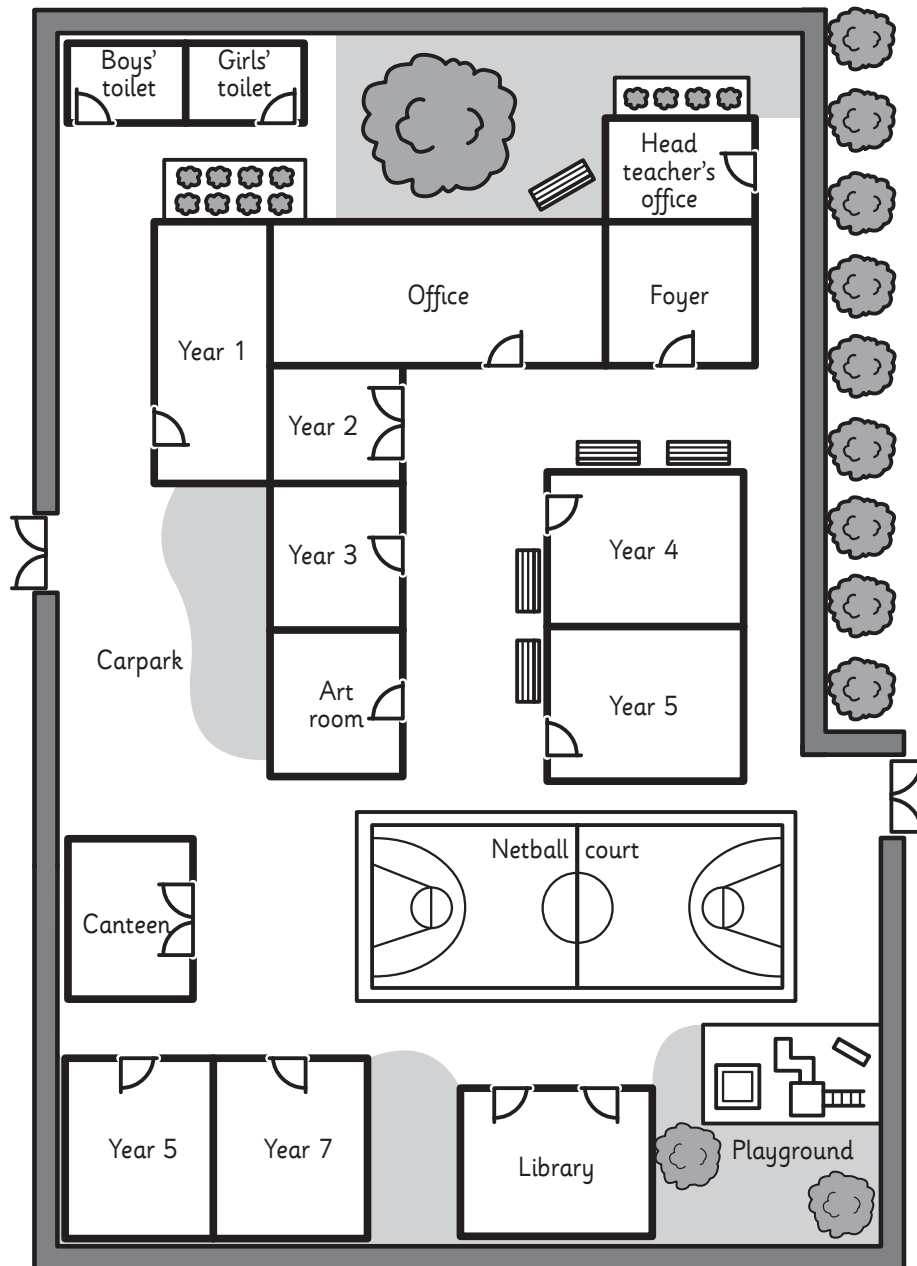
1 Look at the grid. Draw the figure that is:

| | | | |
|--|----------------------|--|----------------------|
| a under  | <input type="text"/> | b under  | <input type="text"/> |
| c above  | <input type="text"/> | d between  and  | <input type="text"/> |
| e below  | <input type="text"/> | f next to  | <input type="text"/> |

2 Draw something that is:

in front of
your teacher's desk

behind
your teacher's desk



- 3 a** Draw a red line to show **a short way** from the Office to the Year 2 classroom.
- b** Draw a grey line to show **a long way** to get from the Office to the Year 2 classroom. Do not trace over your steps.

| Skills and understandings | Not yet | Kind of | Got it |
|---|---------|---------|--------|
| • Recognises and uses everyday language of position | | | |
| • Reads simple maps and maps routes | | | |

Series B – Geometry – Student Progress Record

Name _____ Class _____ Date _____

What went well: _____

What I need to improve: _____



Series B – Geometry – Student Progress Record

Name _____ Class _____ Date _____

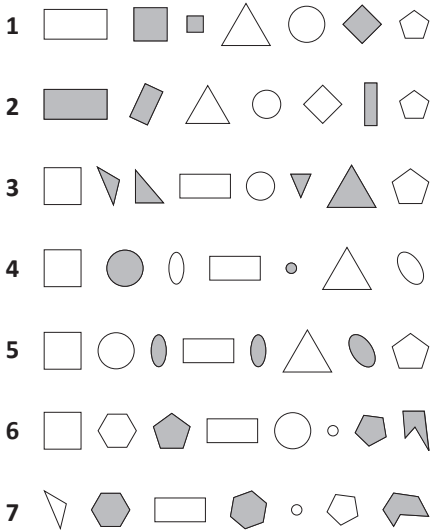
What went well: _____

What I need to improve: _____

Series B – Geometry

ASSESSMENT ANSWERS

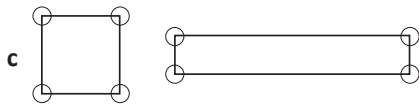
Pages 3–5



8a Answers may include:

- they have 4 sides
- they have 4 vertices
- their opposite sides are same length.

b A rectangle has 2 long and 2 short sides.



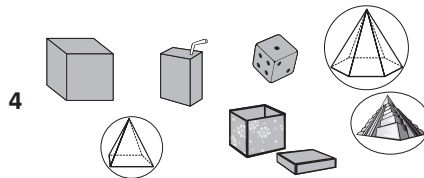
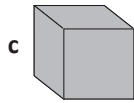
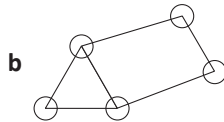
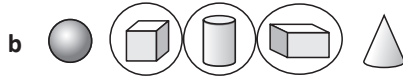
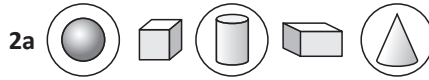
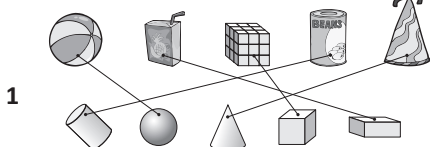
9

| | Shape | Sides | Vertices |
|---|-----------|-------|----------|
| a | triangle | 3 | 3 |
| b | square | 4 | 4 |
| c | rectangle | 4 | 4 |



12 Teacher check.

Pages 6–7



5a Students may note they have triangular sides.

b One is a prism. One is a pyramid. The pyramid's sides come up to one point.

Pages 8–9

- 1a
- b
- c
- d
- e
- f

2 Answers will vary.

3a, b Teacher check.

Series B – Geometry

| Topic | Reference | Strand | Substrand | Objective |
|-----------------|-----------|----------|------------------------|---|
| 2D Shape | 1G1a | Geometry | Properties of Shape | Recognise and name common 2D shapes [e.g. rectangles (including squares), circles and triangles]. |
| 3D Shape | 1G1b | Geometry | Properties of Shape | Recognise and name common 3D shapes [e.g. cuboids (including cubes), pyramids and spheres]. |
| Position | 1P2 | Geometry | Position and Direction | Describe position, direction and movement, including half, quarter and three-quarter turns. |