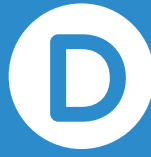


Mathletics

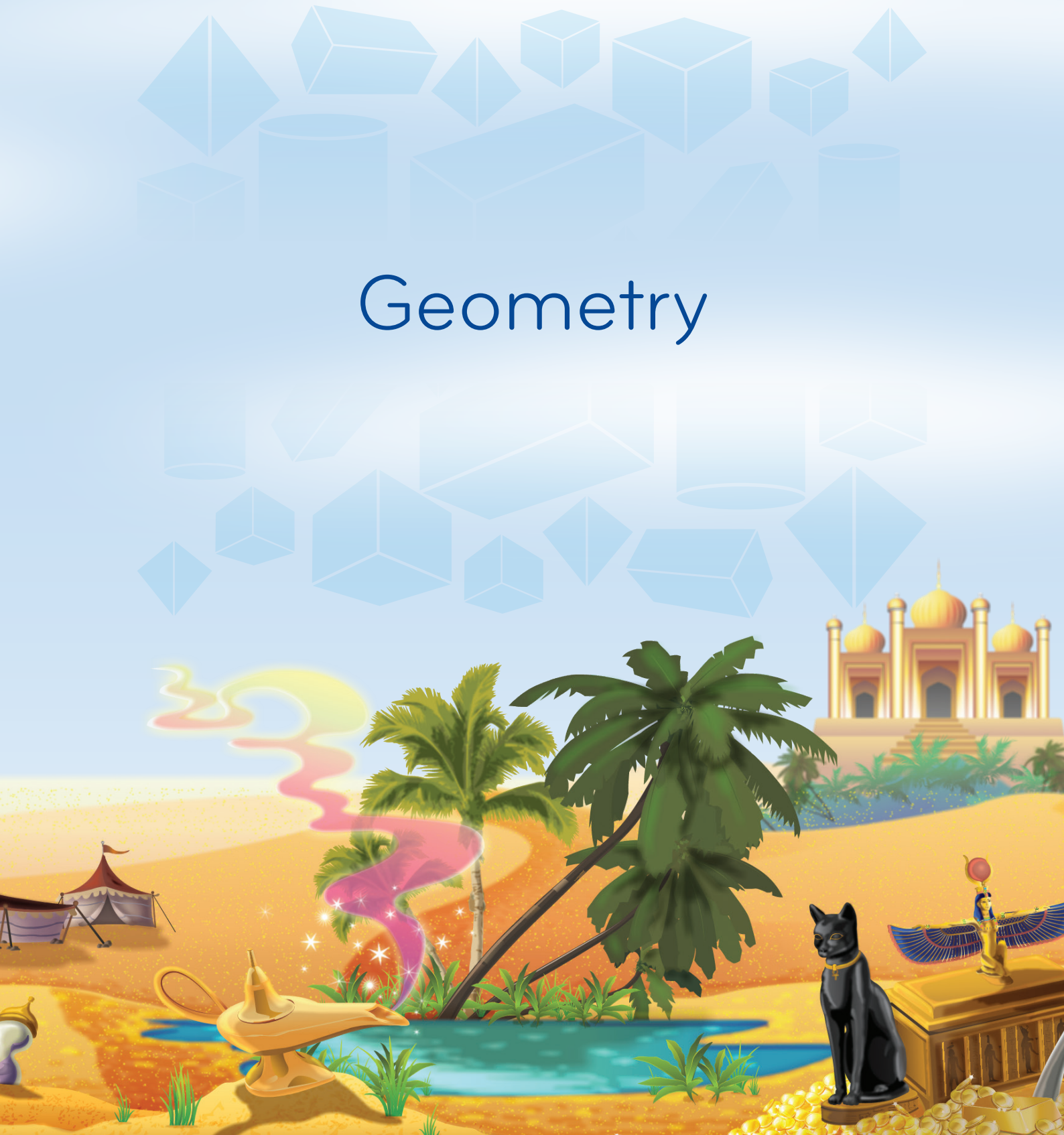
Series



Teacher



Geometry



Series D – Geometry

Contents

Student book answers _____	1
Assessment _____	4
Student progress record _____	9
Assessment answers _____	10
Objectives _____	11

Series Author:

Nicola Herringer

Series D – Geometry

Pages 1–2



	a	b	c
vertical	0	2	6
horizontal	2	3	6
diagonal	8	2	0

3a–c Teacher check.

4a Observe student.

b B G J Q R

These letters are made up of curves and straight lines.

c Sample answer:

E, F, H, I, K, L, M, N, V, W, Z

These letters are made up of only straight lines.

d They all have diagonal lines.

Page 3



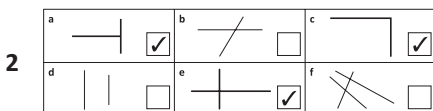
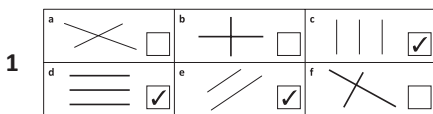
2a 2

b 0

c 2

d 3

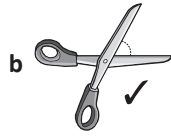
Page 4



3 Answers will vary.

Pages 5–7

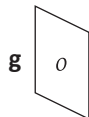
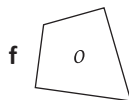
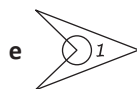
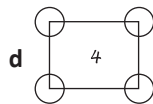
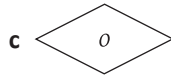
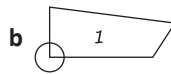
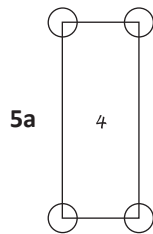
1 4; 1; 3; 2



c Answers will vary.

3 1; acute;
4; obtuse;
2; acute
3; right

4 Answers will vary.



6 Answers will vary.

Page 8

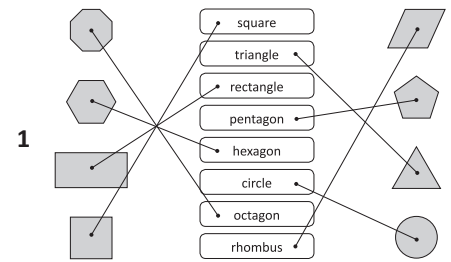
1a 2; half

b 1; quarter

c 4; whole

d 3; three-quarter

Pages 9–10



2a 4; 4

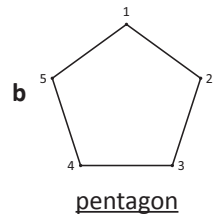
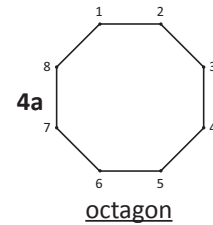
b 5; 5

c 3; 3

d 8; 8

e 6; 6

3 square, triangle, pentagon, trapezium



5a pentagon

b hexagon

Pages 11–12

1a 2; Yes; No; Answers will vary.

b 2; No; No; Answers will vary.

c 1; No; No; Answers will vary.

2 Teacher check.

3 Teacher check.

Page 13

1a square or rectangle

b rhombus

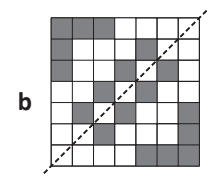
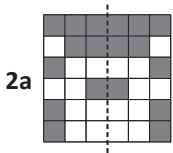
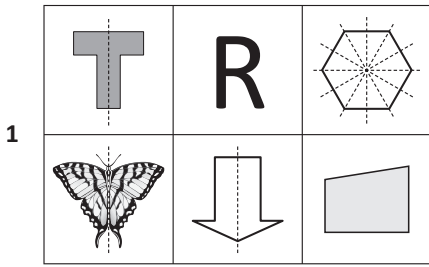
c trapezium

d parallelogram



Series D – Geometry

Pages 14–16

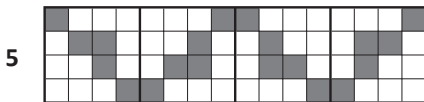
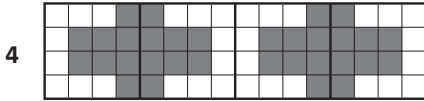


3a turn

b slide

c flip

d turn



6a–c Teacher check.

7 Teacher check.

Page 17

What to do

1 Teacher check.



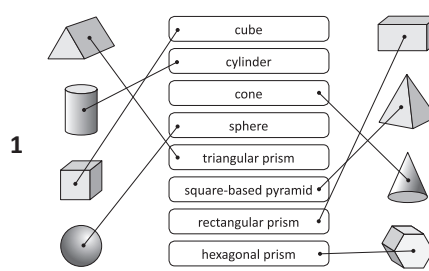
Page 18

What to do

Sample answers:



Page 19

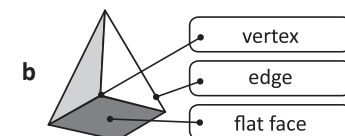
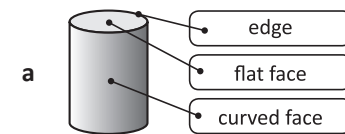


2 16; 5; 3

Page 20

1 Answers will vary.

Sample answers:



2a 2; 1; 2; 0

b 5; 0; 8; 5

c 0; 1; 0; 0

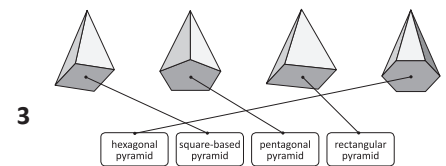
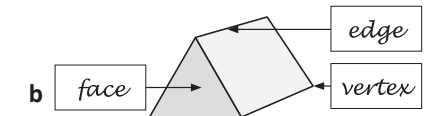
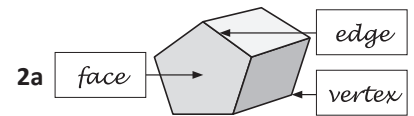
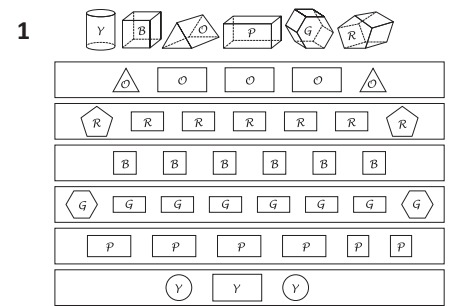
3a sphere

b square-based pyramid

c cylinder

4 5; 1; 1

Pages 21–22



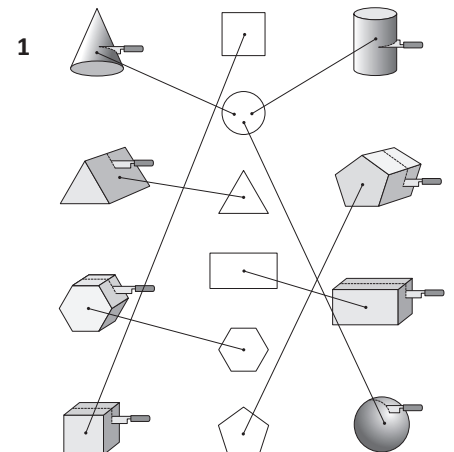
4a 7; 12; 7

b 6; 10; 6

c 5; 8; 5

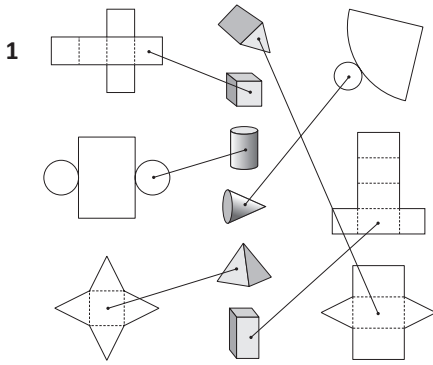
d 5; 8; 5

Page 23

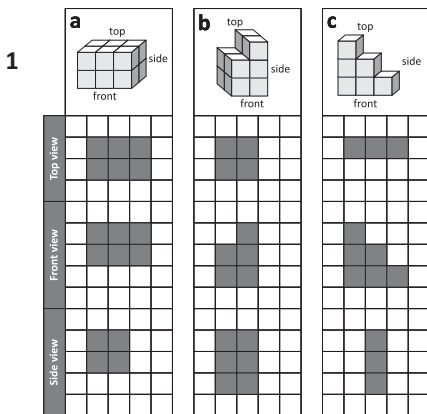


Series D – Geometry

Page 24



Page 25



Page 26

What to do

Puzzle 1



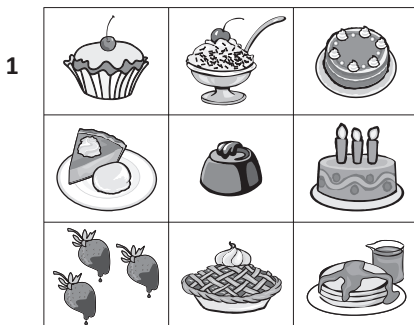
Puzzle 2

6; 4; 5

Puzzle 3



Pages 27–28



2 $6 + 12 = 18$;

$12 + 2 = 14$;

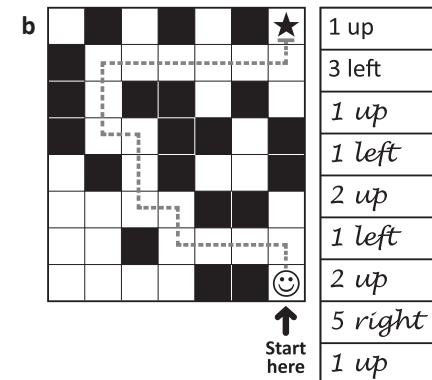
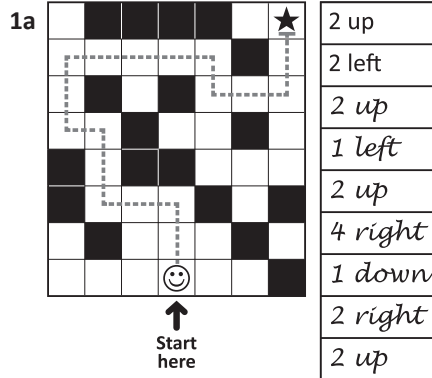
$9 + 11 = 20$;

$21 + 7 = 28$;

Nina

3 Answers will vary.

Pages 29–30



2a Answers will vary.

b Teacher check.



4a Phillips Road

b Johnston Street

c Adam

d Turn right into Foxhill Street, left into Fig Tree Street and right into Rosebud Road.

Page 31

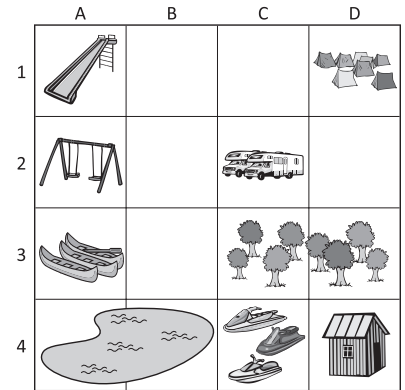
1a Slide

b Kayaks

c Caravans

d Tents

2



3a–f Answers will vary.

Sample answers.

	A	B	C	D
1	4		24	
2		9		N
3				
4				8

g A2, A3, A4, B1, B3, B4, C2, C3, D1, D3

Page 32

1a west

b north

c south

d east



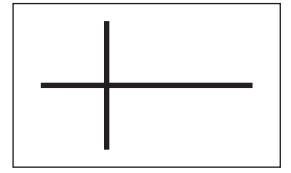
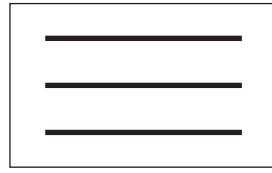
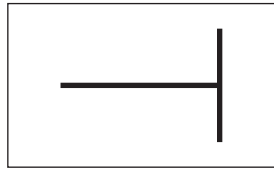
3 east

Page 28

What to do

Teacher check.

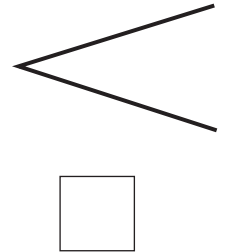
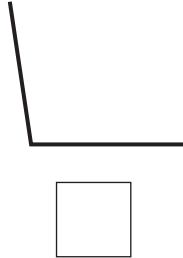
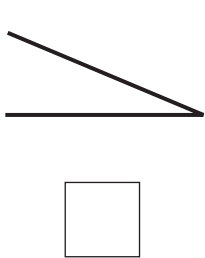
1 Connect each set of lines to the correct name:



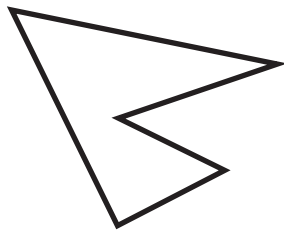
parallel

perpendicular

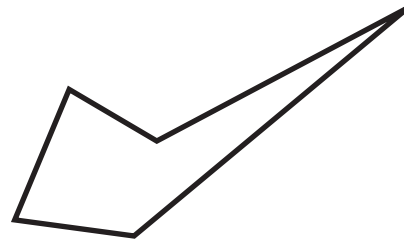
2 Order these angles from smallest to largest by writing 1 to 4 under each one. Put a tick next to the right angle.



3 Complete this table for the shapes below:



Shape A



Shape B

	Shape A	Shape B
a	How many angles are smaller than a right angle?	
b	How many angles are larger than a right angle?	

Skills	Not yet	Kind of	Got it
• Recognises parallel and perpendicular lines			
• Identifies angles in 2D shapes			
• Describes angle size as a right angle, smaller or larger than a right angle			

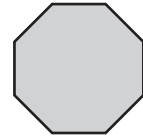
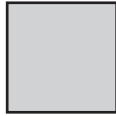
1 Connect each of these 2D shapes to the correct name:

octagon

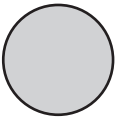


hexagon

rectangle

square



2 Complete the table for these 2D shapes:

	Name	Number of sides	Number of angles
a			
b			
c			

3 Which shape am I? Circle the correct answer.

I have 4 sides but I am not a square.

My opposite angles are equal and not all sides are the same length.

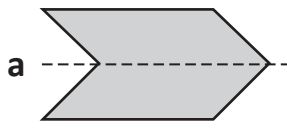
I have 2 pairs of parallel lines.

I am a parallelogram.

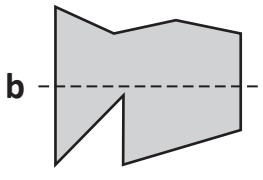
I am a rhombus.

Skills	Not yet	Kind of	Got it
<ul style="list-style-type: none"> Names 2D shapes: square, circle, rectangle, triangle, pentagon, hexagon, octagon, rhombus, parallelogram, trapezium 			
<ul style="list-style-type: none"> Describes 2D shapes by the number of sides and angles 			

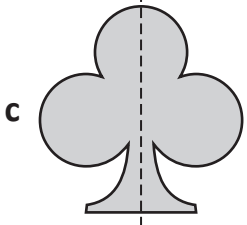
4 Tick the shapes that are symmetrical and cross the shapes that are not in each box.




a



b

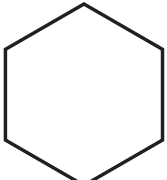


c




d


5 Draw one line of symmetry on these shapes:



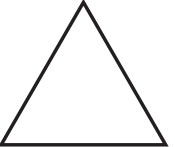
a



b

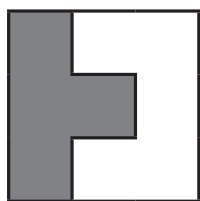


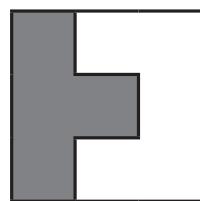
c

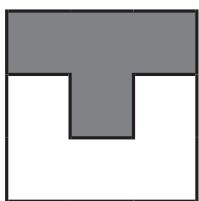


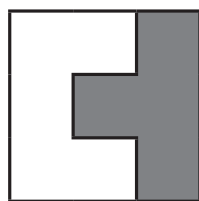
d

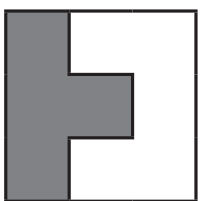
6 How has the tile been moved each time? Write flip, slide or turn in each box.















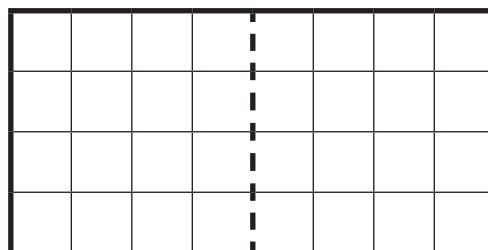






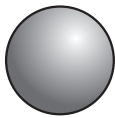
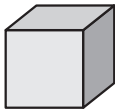
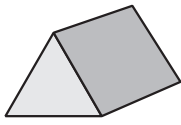


7 Create a symmetrical design in this grid. Shade whole squares.



Skills	Not yet	Kind of	Got it
• Classifies objects as symmetrical or not			
• Identifies some lines of symmetry for a 2D shape			
• Can recognise whether a shape or pattern has been turned			

1 Link each shape to the correct name with a line:



cube

cylinder

cone

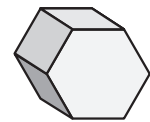
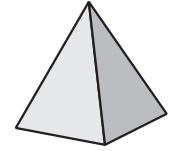
sphere

triangular prism

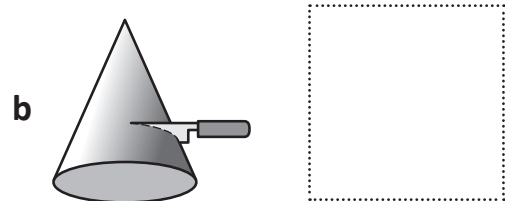
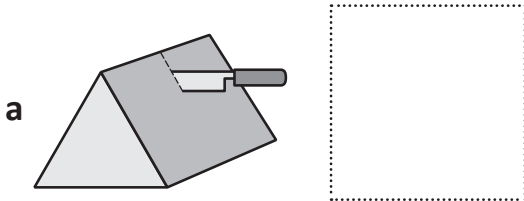
square-based pyramid

cuboid

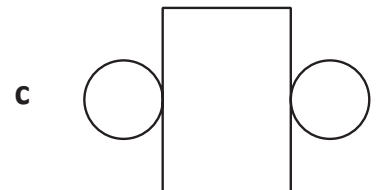
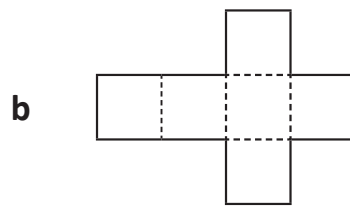
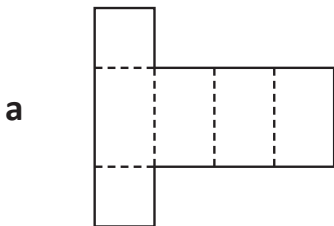
hexagonal prism



2 Draw the cross section of this shape:



3 Name the shape for each net:



Skills	Not yet	Kind of	Got it
• Names common prisms, pyramids, cylinders, cones and spheres			
• Identifies a cross section of a 3D object			
• Recognises the nets of common 3D objects			

Position

Name _____

1 Describe the position of these Mathletes using the compass.

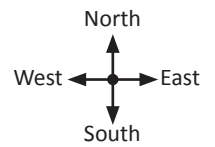
a Mia is _____ of Casey.



Dixie



Casey



b Dixie is _____ of Joe.

c Casey is _____ of Dixie.



Joe

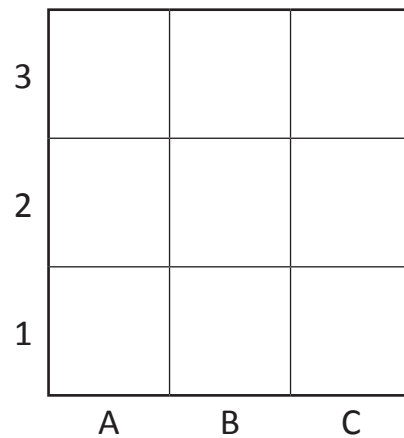


Mia

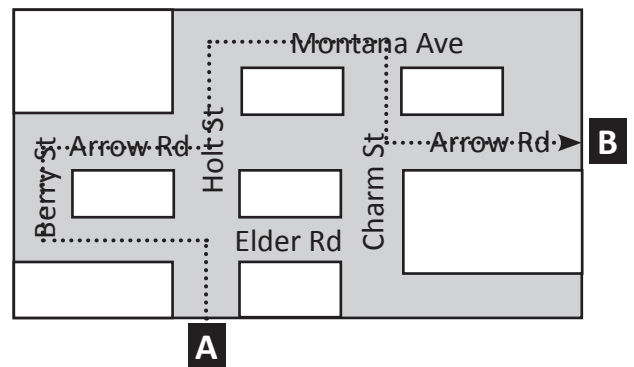
d Joe is _____ of Mia.

2 Follow the directions for the grid on the right.

- Draw a large dot in B3.
- Write the first letter of your name in C1.
- Draw an arrow facing left in A2.
- Write the answer to 2×3 in C2.
- Which spaces are blank?



3 Carly's house is at A. Her friend Jo's house is at B. This is the way Carly walks to Jo's house. Is there a shorter way she can go? Describe it below:



Skills	Not yet	Kind of	Got it
• Uses N, S, E and W to describe location			
• Uses grid coordinates to describe position			
• Describes a route on a basic map			

Series D – Geometry – Student Progress Record

Name _____ Class _____ Date _____

What went well: _____

What I need to improve: _____



Series D – Geometry – Student Progress Record

Name _____ Class _____ Date _____

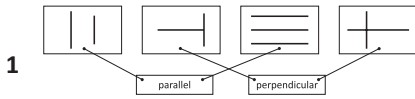
What went well: _____

What I need to improve: _____

Series D – Geometry

ASSESSMENT ANSWERS

Page 4



2a 1

b 4

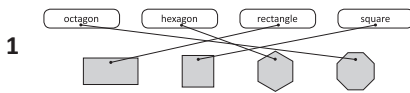
c 3

d 2

3a 4; 3

b 1; 2

Pages 5–6



2a circle; 1; 0

b pentagon; 5; 5

c rhombus; 4; 4

3 I am a parallelogram.

4a ✓

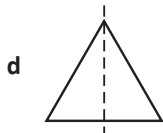
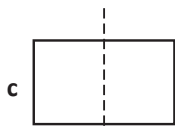
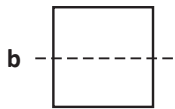
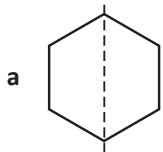
b ✗

c ✓

d ✗

5 Answers will vary.

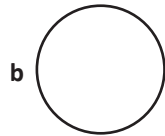
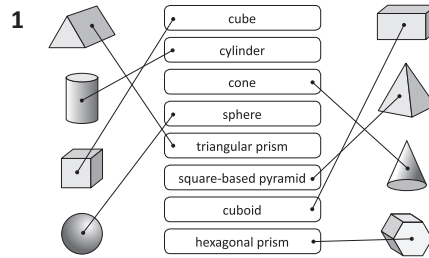
Sample answers:



6 slide; turn; turn; flip

7 Teacher check.

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3a rectangular prism

b cube

c cylinder

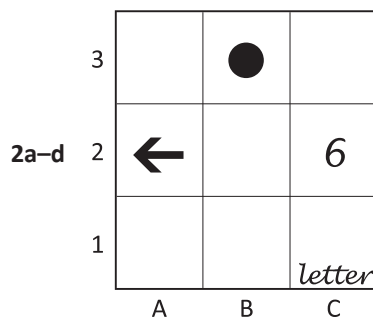
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1a south

b north

c east

d west



e A1, A3, B1, B2, C3

3 Answers will vary.

Series D – Geometry

Topic	Reference	Strand	Substrand	Objective
Lines and Angles	3G2	Geometry	Properties of shapes	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
Investigating 2D Shapes	3G3a	Geometry	Properties of shapes	Draw 2D shapes.
Investigating 3D Shapes	3G3b	Geometry	Properties of shapes	Make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them.
Lines and Angles	3G4a	Geometry	Properties of shapes	Recognise that angles are a property of shape or a description of a turn.
Lines and Angles	3G4b	Geometry	Properties of shapes	Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.
Position	4P2	Geometry	Position and direction	Describe movements between positions as translations of a given unit to the left/right and up/down.
Position	4P3a	Geometry	Position and direction	Describe positions on a 2D grid as coordinates in the first quadrant.