BROAD HORIZON
TUITION CENTRE

11+ Tuition – Year 4

Week 40

Revision Lesson

ANSWERS

Maths

Elapsed Time

Start, End and Elapsed Time

Nearest Minutes: MS1

Q.No	Start Time	End Time	Elapsed Time
1)	1:18 A.M.	3:17 P.M.	13 hours and 59 minutes
2)	5:36 P.M.	1:28 A.M.	7 hours and 52 minutes
3)	11:56 A.M.	3:20 P.M.	3 hours and 24 minutes
4)	7:51 P.M.	6:03 A.M.	10 hours and 12 minutes
5)	1:07 A.M.	1:51 P.M.	12 hours and 44 minutes
6)	9:23 P.M.	5:56 A.M.	8 hours and 33 minutes
7)	9:00 A.M.	5:34 P.M.	8 hours and 34 minutes
8)	3:34 P.M.	1:17 A.M.	9 hours and 43 minutes
9)	8:49 A.M.	4:06 P.M.	7 hours and 17 minutes
10)	7:43 A.M.	10:09 P.M.	14 hours and 26 minutes
11)	6:31 P.M.	3:22 A.M.	8 hours and 51 minutes
12)	11:14 A.M.	6:51 P.M.	7 hours and 37 minutes
13)	6:22 P.M.	11:32 A.M.	17 hours and 10 minutes
14)	Noon	9:23 A.M.	21 hours and 23 minutes
15)	8:03 A.M.	5:00 P.M.	8 hours and 57 minutes

Name: _____ Score: _____

Answer key

Start, End and Elapsed Time

Nearest 5 Minutes: ES1

Q.No	Start Time	End Time	Elapsed Time
1)	3:45 P.M.	**6:40 P.M.**	2 hours and 55 minutes
2)	8:10 A.M.	9:35 A.M.	**1 hour and 25 minutes**
3)	**6:50 P.M.**	7:20 P.M.	30 minutes
4)	10:20 A.M.	Noon	**1 hour and 40 minutes**
5)	1:50 P.M.	**7:15 P.M.**	5 hours and 25 minutes
6)	7:35 P.M.	10:25 P.M.	**2 hours and 50 minutes**
7)	**2:05 A.M.**	8:50 A.M.	6 hours and 45 minutes
8)	6:20 P.M.	**7:40 P.M.**	1 hour and 20 minutes
9)	9:30 A.M.	Noon	**2 hours and 30 minutes**
10)	**5:15 A.M.**	10:35 A.M.	5 hours and 20 minutes
11)	3:55 A.M.	**6:10 A.M.**	2 hours and 15 minutes
12)	**1:40 P.M.**	8:50 P.M.	7 hours and 10 minutes
13)	4:35 P.M.	**6:15 P.M.**	1 hour and 40 minutes
14)	**1:25 A.M.**	8:30 A.M.	7 hours and 5 minutes
15)	8:05 P.M.	11:00 P.M.	**2 hours and 55 minutes**

Bus Timetable problem answers

★★

1. **Yes**
2. **9:30am, 10:10am, 1:00pm and 1:30pm**
3. **25 minutes**
4. **8:40am**
5. **2 - Star Street and Twinkl City**
6. **Twinkl Street**
7. **Twinkl City**
8. **501**
9. **20 minutes**
10. **9:10am**

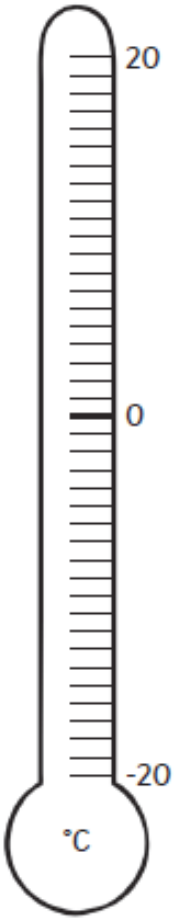
Word Problems Involving Negative Numbers **Answers**

1) Use the thermometer to help you calculate the answers.

a) 7 less than 5 is **-2**.

b) 11 more than -3 is **8**.

c) The difference between -7 and 8 is **15**.



2)

a) The temperature in Bristol is 3°C.

Overnight, the temperature falls by 7°C.

What is the temperature in the morning?

The temperature in the morning is -4°.

b) By lunchtime, the temperature has risen 9°C.

What is the temperature now?

At lunchtime the tempreature is 5°C.

3) A freezer is broken. The temperature inside the freezer is -4°C. The engineer fixes the fault and the temperature falls by 9°C. What is the temperature inside the freezer now?

The tempreature is -13°C.

4) Use the clues to mark the temperatures on the number line.

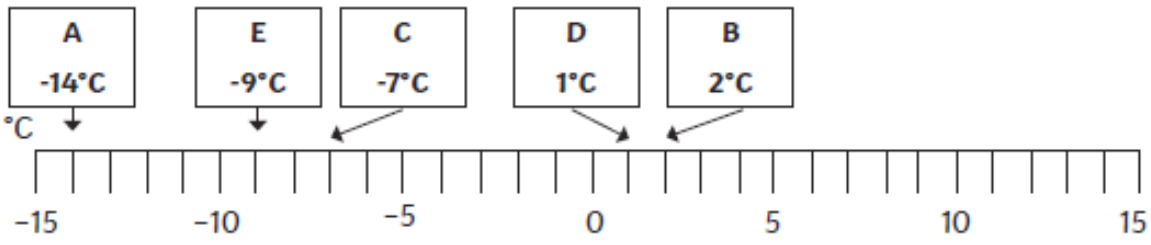
a) **A**: A negative number, 4 less than -10°C

B: A positive number, 16 more than A

C: A number 9 less than B

D: A positive number between C and B that isn't a multiple of 2

E: A negative number, 10 less than D



Word Problems Involving Negative Numbers **Answers**

b) Write the temperatures in ascending order.

-14, -9, -7, 1, 2

5) Felix has £36 in his bank account. His phone bill and broadband bill come out of this account. Now, his account is overdrawn at -£25. If the phone bill was £23, how much was the broadband bill? Show your working out in the box below.

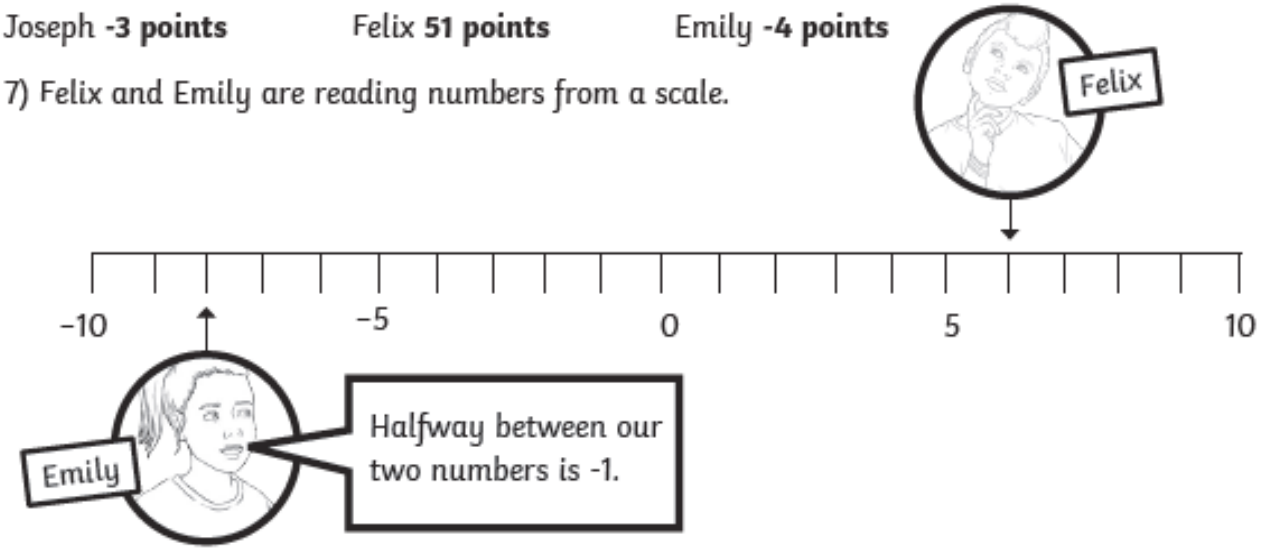
£36 – £23 = £13
The difference between £13 and -£25 is £25 + £13 = £38.
The broadband bill was £38.

6) Three children are playing a computer game. All players start with 40 points. Use the clues to work out how many points each child has at the end of the game.

- Joseph loses 28 points, then loses another 15 points.
- Felix gains 27 points but then loses 16 points.
- Emily loses 36 points, then loses another 8 points.

Joseph **-3 points** Felix **51 points** Emily **-4 points**

7) Felix and Emily are reading numbers from a scale.



Is Emily's statemtent correct? Prove it!

Emily's statement is correct.
Felix's number is 6. Emily's number is -8.

The difference between the two numbers is 14.

Halfway between these two numbers is -8 + 7 = -1.

Mean, Mode, Median, and Range

1) 17, 18, 20, 17
17, 17, 18, 20

Mode 17 Range 3

2) 8, 16, 11, 9
8, 9, 11, 16

Median 10 Mode None

3) 5, 6, 18, 19
5, 6, 18, 19

Mean 12 Range 14

4) 19, 6, 17, 8, 20, 15, 21, 14
6, 8, 14, 15, 17, 19, 20, 21

Mode None Range 15

5) 14, 10, 9, 19, 18, 8
8, 9, 10, 14, 18, 19

Mode None Range 11

6) 8, 16, 10, 10, 18, 11, 12, 11
8, 10, 10, 11, 11, 12, 16, 18

Median 11 Mode 10, 11

7) 12, 9, 9, 14, 11, 17
9, 9, 11, 12, 14, 17

Mode 9 Range 8

8) 8, 9, 7, 17, 9, 11, 16, 11
7, 8, 9, 9, 11, 11, 16, 17

Mean 11 Mode 9, 11

9) 12, 7, 15, 11, 10, 11
7, 10, 11, 11, 12, 15

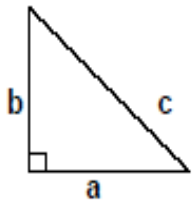
Mode 11 Range 8

10) 17, 10, 9, 20
9, 10, 17, 20

Mean 14 Range 11

Identify and Calculate the Area and Perimeter for each Polygon.

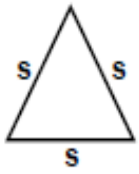
1)



a = 71 mm b = 60 mm
c = 92.96 mm

Area: 2130 sq mm
Perimeter: 223.96 mm
Type: Right Triangle

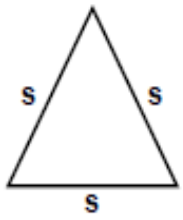
2)



s = 56 mm

Area: 1357.93 sq mm
Perimeter: 168 mm
Type: Equilateral Triangle

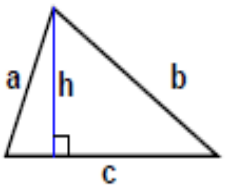
3)



s = 75 cm

Area: 2435.7 sq cm
Perimeter: 225 cm
Type: Equilateral Triangle

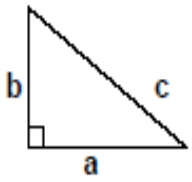
4)



a = 57.98 cm b = 90.72 cm
c = 94 cm h = 54 cm

Area: 2538 sq cm
Perimeter: 242.7 cm
Type: Common Triangle

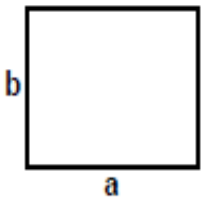
5)



a = 70 cm b = 51 cm
c = 86.61 cm

Area: 1785 sq cm
Perimeter: 207.61 cm
Type: Right Triangle

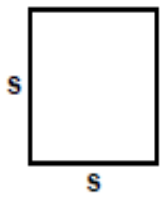
6)



a = 76 mm b = 58 mm

Area: 4408 sq mm
Perimeter: 268 mm
Type: Rectangle

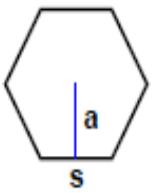
7)



s = 56 cm

Area: 3136 sq cm
Perimeter: 224 cm
Type: Square

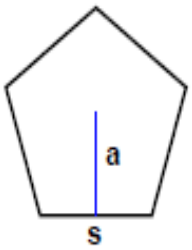
8)



s = 63 cm
a = 54.5596 cm

Area: 10311.76 sq cm
Perimeter: 378 cm
Type: Hexagon

9)



s = 80 mm
a = 55.0553 mm

Area: 11011.06 sq mm
Perimeter: 400 mm
Type: Pentagon

Perimeter & Area Word Problems - Answer Sheet

Q1) Perimeter = 2 × (12 + 7) = 38 cm
Area = 12 × 7 = 84 cm²

Q2) One side = 40 ÷ 4 = 10 cm
Area = 10 × 10 = 100 cm²

Q3) Area = ½ × 10 × 6 = 30 cm²

Q4) Area = (8×4) + (6×4) = 32 + 24 = 56 cm²
Perimeter = Count outer sides = 8+6++4+6+8+4= 36 cm

Q5) Outer area = 17 × 11 = 187 m²
Garden area = 15 × 9 = 135 m²
Path area = 187 - 135 = 52 m²

Q6) Other side = (50 ÷ 2) - 15 = 10 cm
Area = 15 × 10 = 150 cm²

Q7) Area = 10 × 7 = 70 cm²

Q8) Area = (10×4) + (4×4) = 40 + 16 = 56 cm²
Perimeter = 10 + 4 + 4 + 8 + 4 + 12 = 42 cm

Volume Word Problems **Answers**

1. James is building a cuboid out of building bricks. It is 12cm wide, 4cm high and 3cm deep. What is the volume of the cuboid?
   144cm³
2. Mohammed bought a storage box online. The box is 15cm wide, 6cm high and 6cm deep. What is the volume of the box?
   540cm³
3. Eddo's bedroom is 5m wide, 4m long and 3m from floor to ceiling. What is the volume of Eddo's bedroom?
   60m³
4. Maria is posting a parcel that is 18cm wide, 3cm high and 4cm deep. What is the volume of the parcel?
   216cm³
5. Lorenzo wanted to hire a storage unit which was 2.5m wide, 4m long and 4m high. What is the volume of the storage unit?
   40m³
6. Liberty was building cube coffee table. She measured one side of the table. The side measured 20cm. What is the volume of the table?
   8 000cm³
7. Amina had a pencil case that measured 210cm³. If it was 12cm wide and 3.5cm high, what was the depth of the pencil case?
   5cm
8. Calculate the volume of the following storage boxes and then put them in order from smallest to largest.
   A = 2m wide, 3m high and 3.5m deep = **21m³**
   B = 1.5m wide, 2m high and 5m deep = **15m³**
   C = 2.2m wide, 2.5m high and 3m deep = **16.5m³**

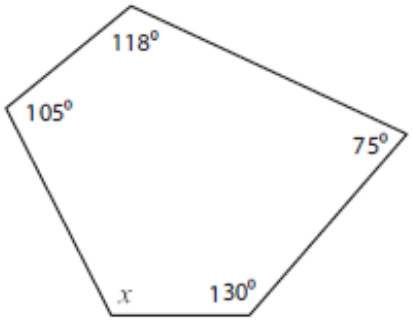
B	C	A
smallest		largest

9. a) A truck has room to stack crates of 48m³. What could the dimensions of each crate be?
   Example answers:
   48m × 1m × 1m = 48m³
   24m × 2m × 1m = 48m³
   12m × 4m × 1m = 48m³
   6m × 2m × 4m = 48m³
   4m × 4m × 3m = 48m³
   12m × 2m × 2m = 48m³
   16m × 3m × 1m = 48m³
   8m × 2m × 3m = 48m³
   6m × 1m × 8m = 48m³

   b) Which of the dimensions would be the most realistic for a crate?
   Accept either of the following:
   6m × 2m × 4m
   4m × 4m × 3m

Find the value of x.

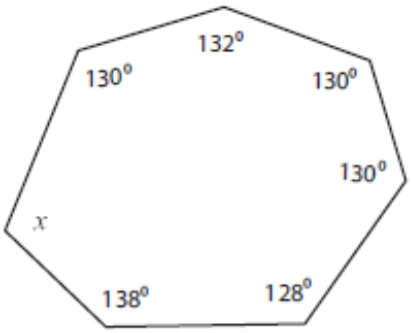
1)



Sum of the interior angles = 540°

x = 112°

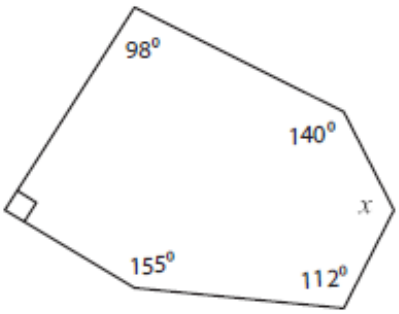
2)



Sum of the interior angles = 900°

x = 112°

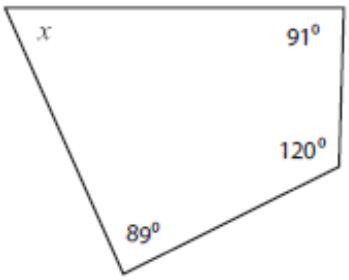
3)



Sum of the interior angles = 720°

x = 125°

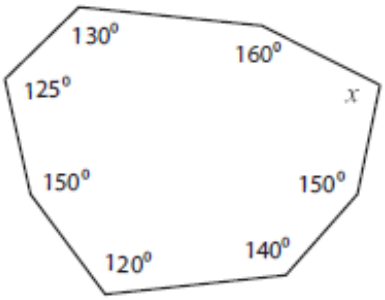
4)



Sum of the interior angles = 360°

x = 60°

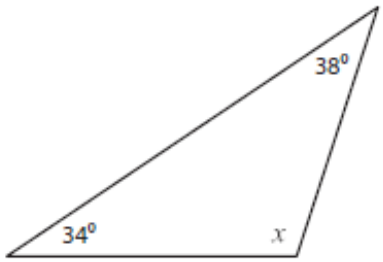
5)



Sum of the interior angles = 1080°

x = 105°

6)

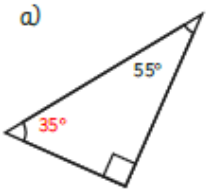


Sum of the interior angles = 180°

x = 108°

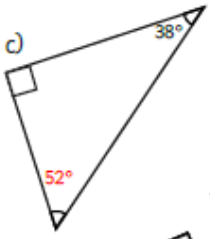
Calculate the missing angle in these right-angled triangles.

a)

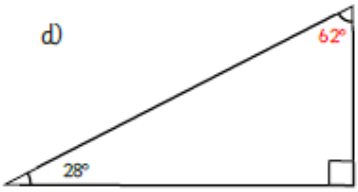


b)

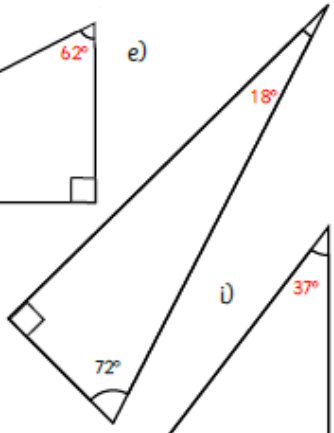
c)



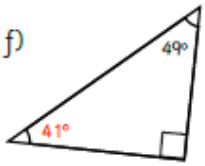
d)



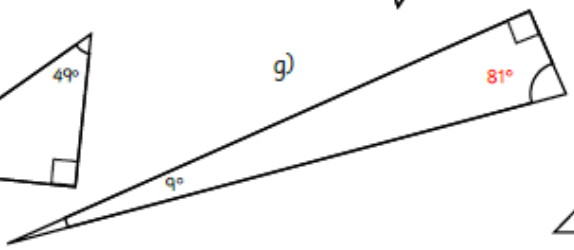
e)



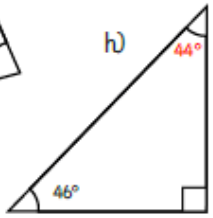
f)



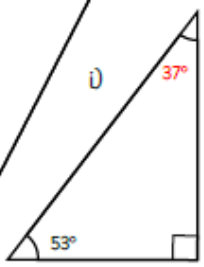
g)



h)



i)



Comprehension Answers

PAGES 70 - 77 — ASSESSMENT TEST 6

1. C

In the passage it says that the blizzard started "Towards noon".

2. D

The passage says that Achak dragged Alawa into the forest where "the trees would provide some kind of break against the icy winds".

3. B

The passage says that Achak "pulled his sister closer in the darkness" and she stopped shivering with "the combined warmth of their bodies".

4. D

The passage says that Alawa was "clutching the bag of herbs they had been collecting in the forest when the storm started."

5. A

The passage says the snow made "the once-familiar countryside unrecognisable".

6. E

In the passage it says that "The wind sprang from nowhere, whipping the flakes to a frenzy" which shows that the wind was strong.

7. C

At first it was sunny, then the blizzard started and forced the children deeper into the forest. They sheltered in the cave and then it began to get dark.

8. D

'Hidden' is closest in meaning to "obscured". Both words mean 'removed from sight'.

9. D

"magenta" is a strong pinky-purple colour.

10. C

The cave's entrance looked dark against the white snow.

11. A

"Gradually" is an adverb because it describes the verb "stilled".

12. C

This is a metaphor because it describes the snow as being a blanket.

TYPE SEVEN:

cure solution
buy acquire
smell fragrance
agile spry
strong vigorous
imperative essential
revolve gyrate
obstinate flexible
clear opaque
peaceful noisy
occupied empty
quit stay
hide reveal
friend foe
outside interior
allow forbid
odd usual
assist obstruct
indolent industrious
begin conclude

TYPE EIGHT:

laze
cash
pets
sung
sat
stir
part
sat
won
name
art
dear
seat
strap
dank
calm
came
tube
cart
test

TYPE NINE:

ATE	SON	POD
WON	ADO	SET
LOW	EAR	TRY
SAT	AGE	WON
MAT	EGO	TEN
ACT	TOE	EYE
ONE	REV	EWE
PIT	ARE	RED
WIT	ONE	END
ATE	NOW	TEE

TYPE TEN:

thimble pins
chalk crayon
duvet bedspread
cap fez
beaker bowl
wrist ankle
lungs kidney
uncle brother
aunt princess
pond stream
cub cygnet
badger bull
sycamore chestnut
midge gnat
paraffin brine
sandal trainers
keg flagon
canoe yacht
harp viola
cornet saxophone

TYPE ELEVEN:

E	A	E
C	C	A
B	D	B
A	A	E
C	B	D
D	A	E
E	A	C
B	C	B

TYPE TWELVE:

sparrow
dogfish
mongoose
heron
racket
petal
cone
pip
mayonnaise
metal
bottle
nest
pearl
queen
brother
fork
cereal
athlete
cat
whales

Non- Verbal Reasoning

Section 1 — Complete the Pair

1. B
The figure reflects across.

2. B
One black dot is added to each half of the white circle.

3. A
The small shape turns black. It moves down and to the right so that it overlaps the edge of the large white shape.

4. A
Jagged lines become wavy.

5. C
The figure rotates 90 degrees clockwise.

Section 2 — Rotate the Figure

1. D
The figure has been rotated 180 degrees. Options A and C have the wrong shading. Option B is a rotated reflection.

2. D
The figure has been rotated 270 degrees clockwise (or 90 degrees anticlockwise). Option A is a rotated reflection and the black circles are in front of the white shape (instead of behind). Option B is the wrong shape. Option C has the wrong shading.

3. C
The figure has been rotated 90 degrees clockwise. Option A is a rotated reflection. Option B has the wrong shading. In option D, the stripe is the wrong colour and the flower has too few petals.

4. B
The figure has been rotated 180 degrees. Options A, C and D are the wrong shape.

5. C
The figure has been rotated 270 degrees clockwise (or 90 degrees anticlockwise). In option A, the small and large triangles have swapped positions. Option B has the wrong shading. In option D, both triangles are small.

Section 3 — Complete the Grid

1. C
Working from left to right, the figure rotates 90 degrees clockwise.

2. A
Working from left to right, the shape reflects across.

3. A
Working from left to right, the shape moves diagonally up to the right. The shape's shading changes in the sequence white, grey, black.

4. D
In the left-hand grid square, both shapes are white. In the middle grid square, the left-hand shape changes colour. In the right-hand grid square, the right-hand shape changes colour to match the left-hand shape.

Section 4 — Find the Figure Like the First Three

1. A
All figures must have a white semicircle.

2. E
In all figures, there is a black square inside a white triangle.

3. D
All figures have two lines inside the large white shape.

4. D
All figures have a small shaded semicircle, which is rotated the same way as the large semicircle.

5. B
If all figures are rotated so the small shapes are at the top, the shapes go from left to right in the order: star, heart, circle

Section 5 — Look at the Figure from the Right

1. A
There should be two white cubes on the right of the grey block, which rules out options B and D. The grey block should be three cubes long and there should be a gap between the two white blocks, which rules out option C.

2. C
The grey shape should be a cube, which rules out option A. There should be one white cube on the top of the figure, which rules out options B and D.

3. B
There should be a long white block standing upright on the right of the figure, which rules out options A, C and D.

4. D
The grey block should be three cubes long and lie on its side, which rules out options A and B. There should be a gap between the grey block and the white cube, which rules out option C.

Section 6 — Reflect the Figure

1. B
Option A is a 90 degree clockwise rotation.
The triangles in option C have the wrong shading.
Option D is a downwards reflection.

2. C
Option A is a 180 degree rotation. Option B is the wrong shape. Option D is a downwards reflection.

3. B
In option A, the left and right triangles are in front of the white shape (instead of the bottom and right triangles).
In option C, all of the triangles are in front of the white shape.
In option D, all of the triangles are behind the white shape.

4. C
Options A and B have the wrong shading.
Option D is a 90 degree clockwise rotation.

5. A
Options B and D have the wrong shading.
In option C, the shadings have swapped, but the figure has not been reflected.

Section 1 - Complete the Series

1. C

The triangle and the ellipse alternate in each series square.

2. C

The number of lines increases by one in each series square.

3. A

In each series square, the rocket rotatee 45 degrees clockwise.

The colour of the circle alternates between black and white.

4. A

In each series square, the circle moves

down and the black ellipse moves up.

5. C

In each series square, the black shading moves up one shape.

Section 4 - Look at the Figure from the Top

1. B

There should be five blocks visible from above,

which rules out options A, C and D.

2. A

There should be four blocks visible from above, which rules out

options Band C. There are two blocks next to each other at

the back on the right of the figure, which rules out option D.

3. D

There should be four blocks visible from above, which rules out options A and B. There should be three blocks at the back of the figure, which rules out option_ C.

4. C

There should be four blocks visible from above, which rules out options A and B. There should be a line of three blocks alone the back of the figure, which rules out option 0.

Section 2 — Odd One Out

1. A

All the other arrow-style lines are solid.

2. E

In all other figures, the black star has five points.

3. C

In all other figures, the shapes go from left to right in the order: raindrop, star, pentagon.

4. D

In all other figures, the cactus has one big arm and one small arm. (In D it has two big arms.)

5. D

All other figures have only one curved side. (D has two curved sides.) All other figures also have only one line of symmetry.