BROAD HORIZON
TUITION

11+ Tuition

Year 4

Week 14

Lesson

ANSWERS

Starter Task – Quick Revision

Workout the area and perimeter of shapes with the following dimensions

	Length	Width	Area	Perimeter
1)	4cm	8cm	$32cm^2$	24cm
2)	11mm	5mm	$55mm^2$	32mm
3)	2.5m	10m	$25m^2$	25m

4) $2 - 18 =$ **-16**

5) $33 - 47 =$ **-15**

6) $45 \div 1000 =$ **0.045**

7) $2.18 \times 1000 =$ **2180**

8) Convert 2050g to Kg **2.05kg**

9) $79 \times 8 =$ **632**

10) $(3 + 17 - 12)^2 + 3^2 - (6 \times 3 \div 2)^2 =$ **-8**

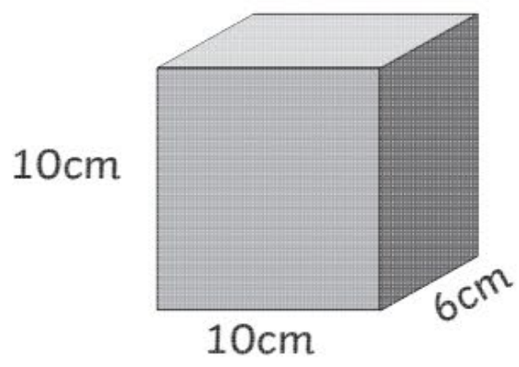
Exercise C

1. Illiterate
2. Norm
3. Disobedient
4. Repulsive
5. Disappoint
6. Arrival
7. Hesitant
8. Solid
9. Decrease
10. Grief

Calculate Volume of Cuboid Activity Sheet (1) **Answers**

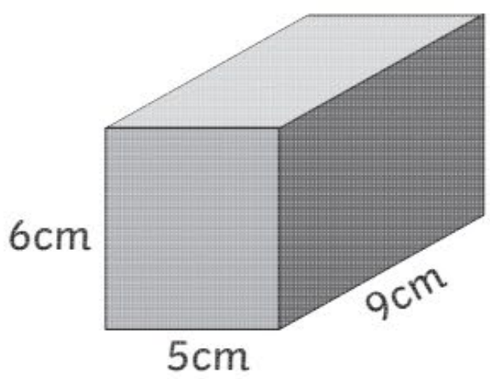
Calculate the volume of the following cuboids.

1.



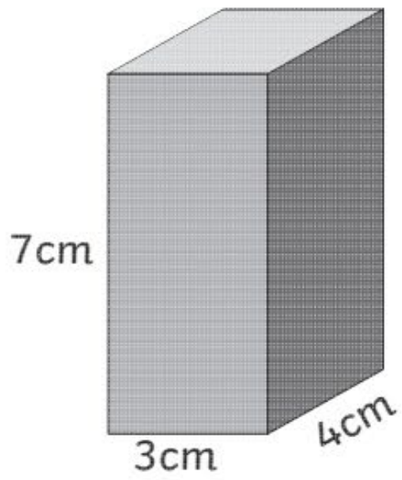
Volume = **600cm³**

2.



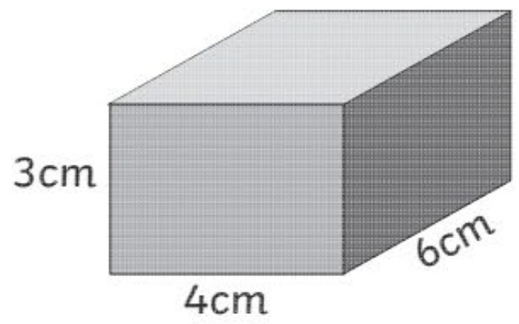
Volume = **270cm³**

3.



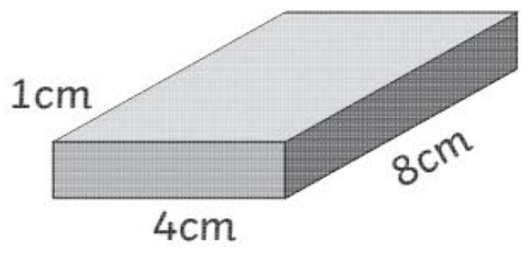
Volume = **84cm³**

4.



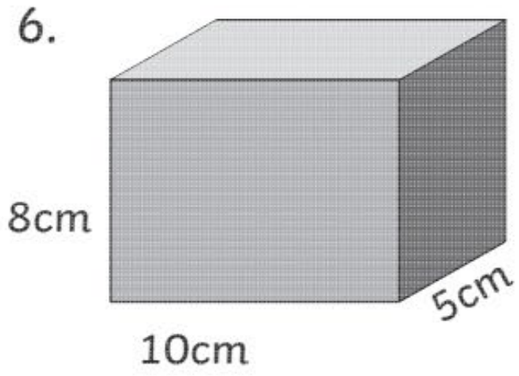
Volume = **72cm³**

5.



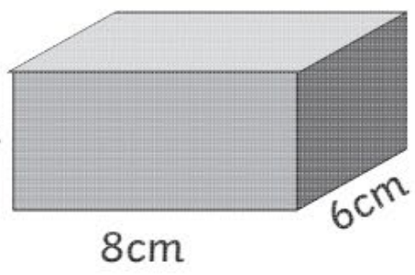
Volume = **32cm³**

6.



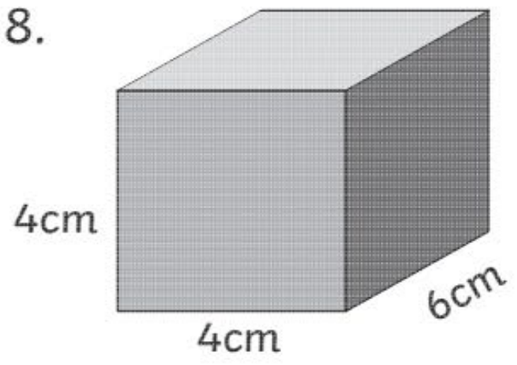
Volume = **400cm³**

7.



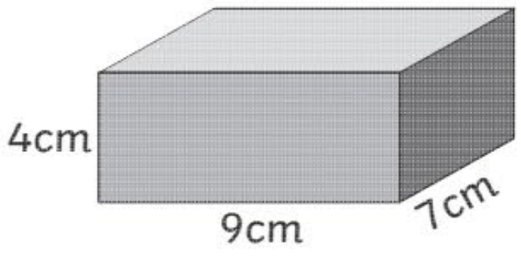
Volume = **192cm³**

8.



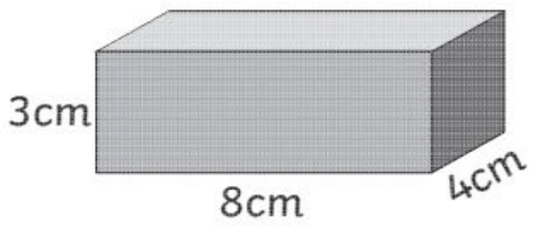
Volume = **96cm³**

9.



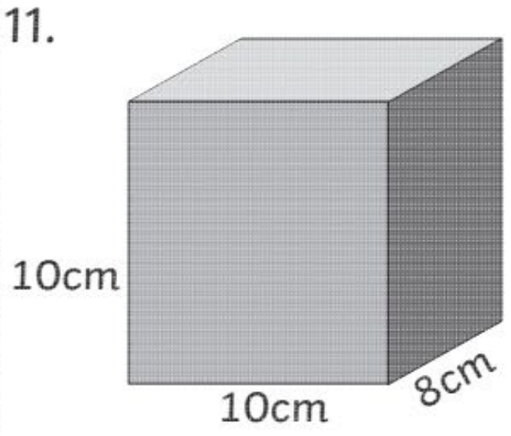
Volume = **252cm³**

10.



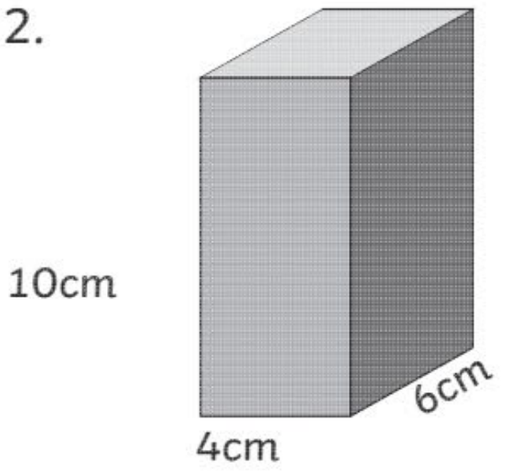
Volume = **96cm³**

11.



Volume = **800cm³**

12.



Volume = **240cm³**

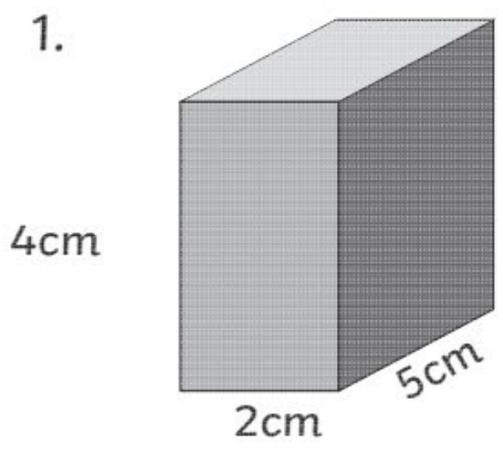
Challenge

Draw 3 different cuboids with a volume of 24cm³, writing the dimensions. Your drawings don't need to be to scale.

Calculate Volume of Cuboid Activity Sheet (2) **Answers**

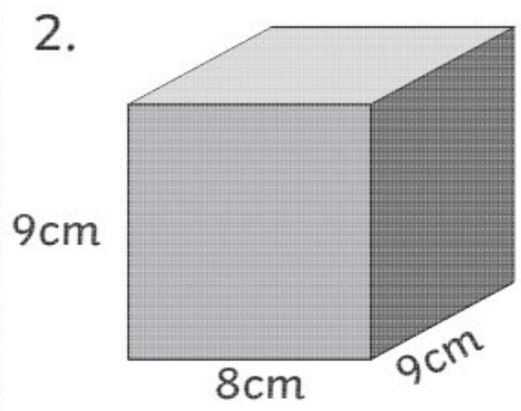
Calculate the volume of the following cuboids.

1.



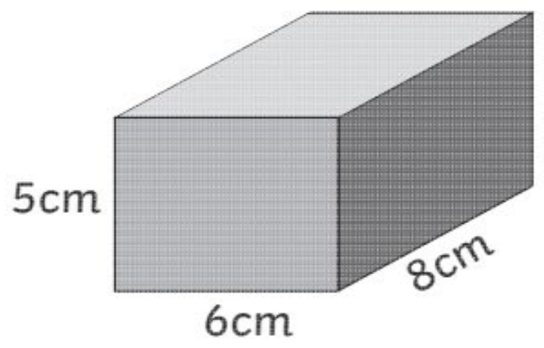
Volume = **40cm³**

2.



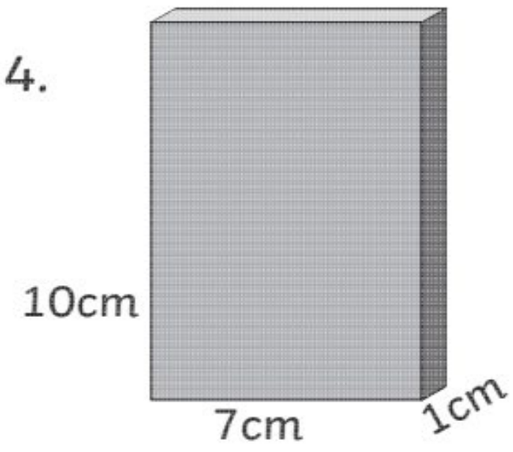
Volume = **648cm³**

3.



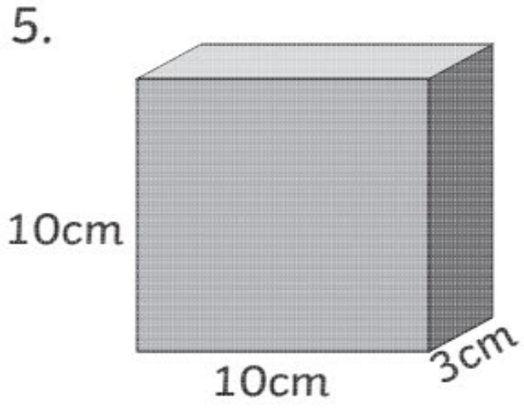
Volume = **240cm³**

4.



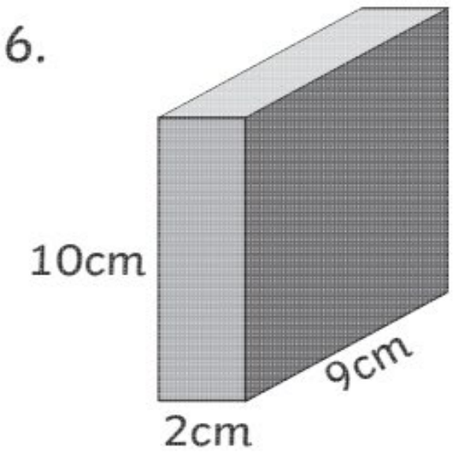
Volume = **70cm³**

5.



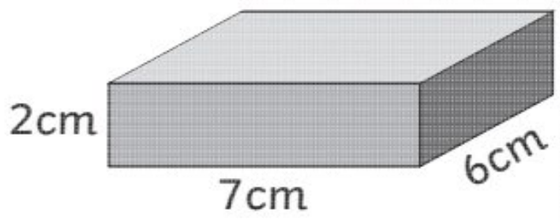
Volume = **300cm³**

6.



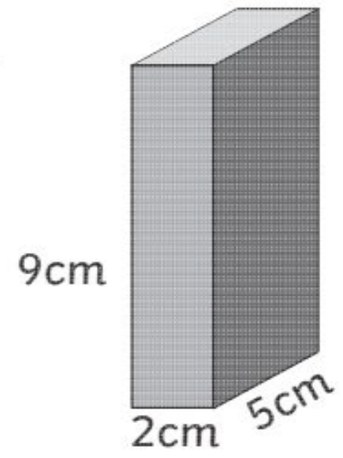
Volume = **180cm³**

7.



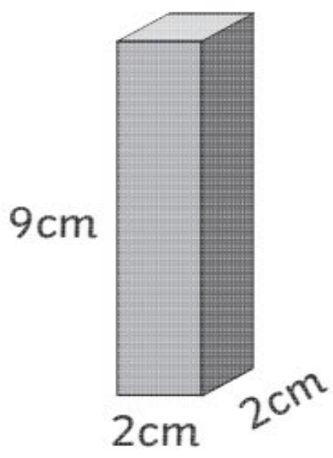
Volume = **84cm³**

8.



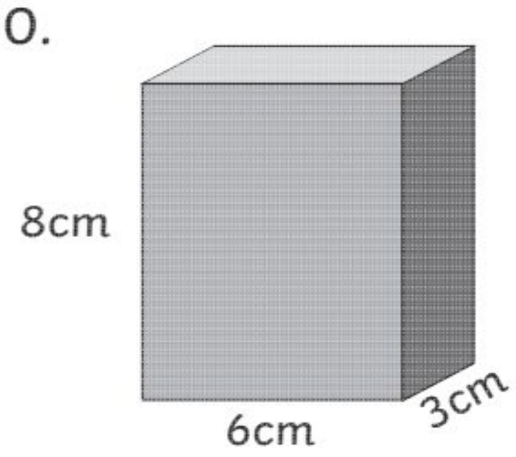
Volume = **90cm³**

9.



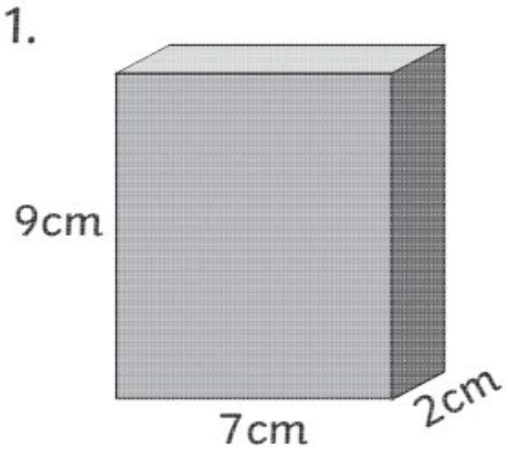
Volume = **36cm³**

10.



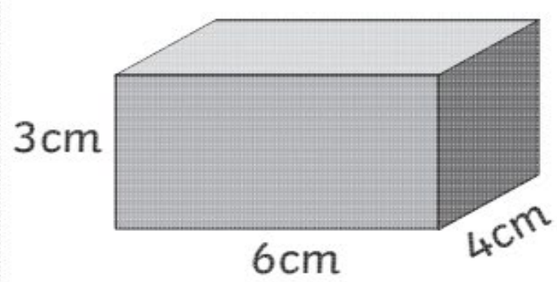
Volume = **144cm³**

11.



Volume = **126cm³**

12.



Volume = **72cm³**

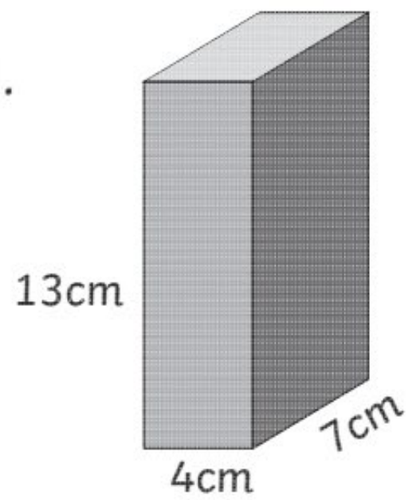
Challenge

Draw 2 different cuboids with a total volume *of* 40m³, writing the dimensions. Your drawings don't need to be to scale!

Calculate Volume of Cuboid Activity Sheet (1) Answers

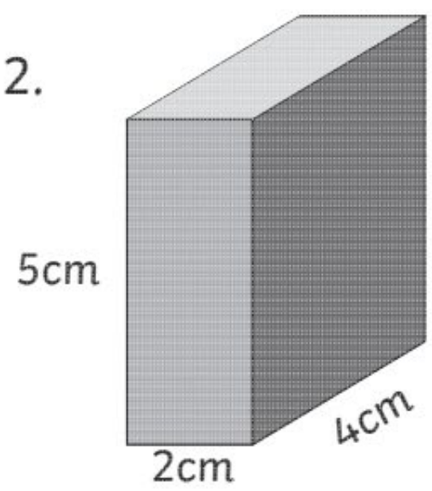
Calculate the volume of the following cuboids.

1.



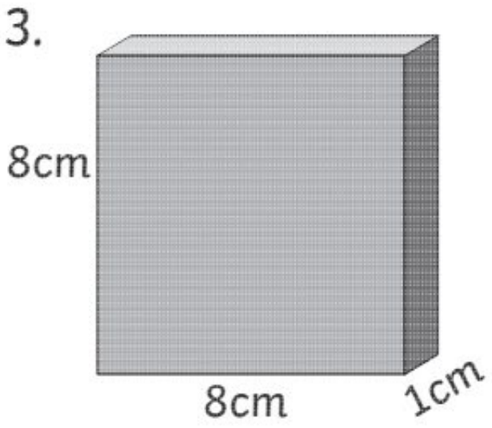
Volume = **364cm³**

2.



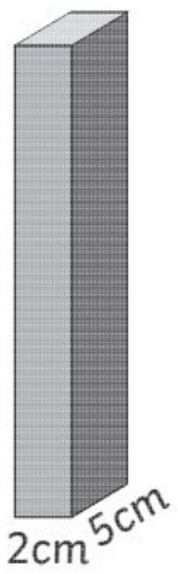
Volume = **40cm³**

3.



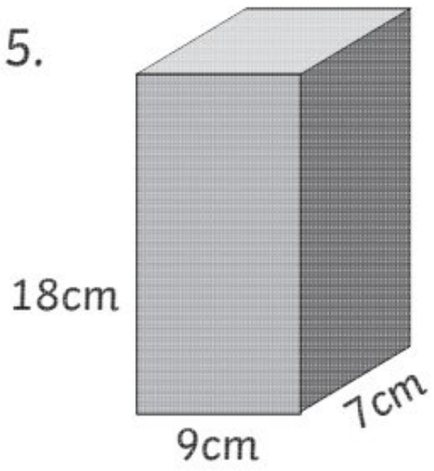
Volume = **64cm³**

4.



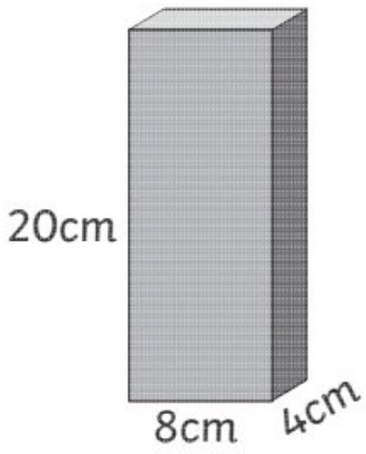
Volume = **160cm³**

5.



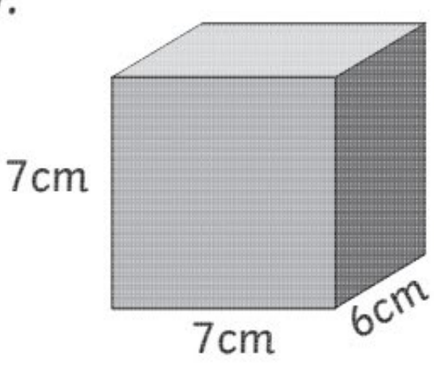
Volume = **1134cm³**

6.



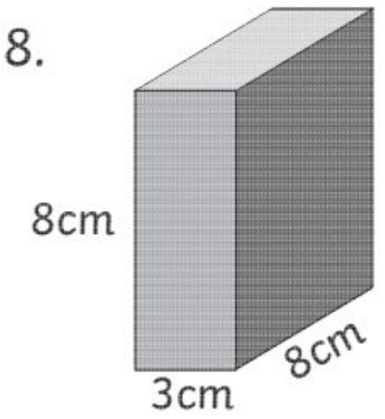
Volume = **640cm³**

7.



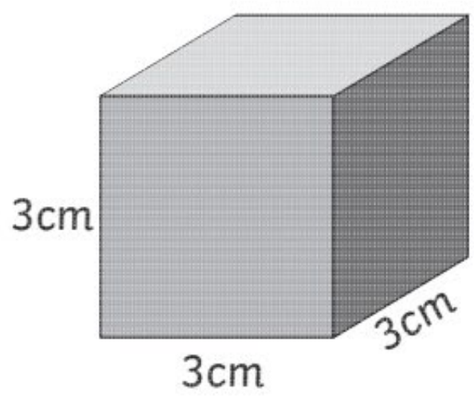
Volume = **294cm³**

8.



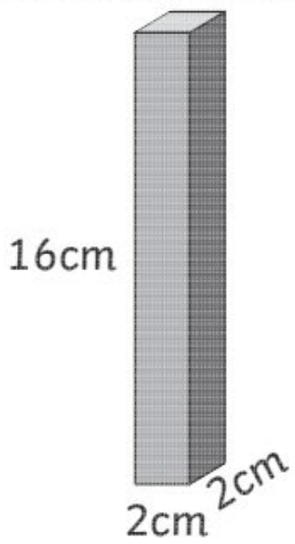
Volume = **192cm³**

9.



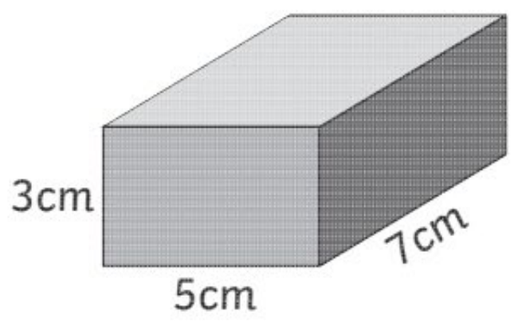
Volume = **27cm³**

10.



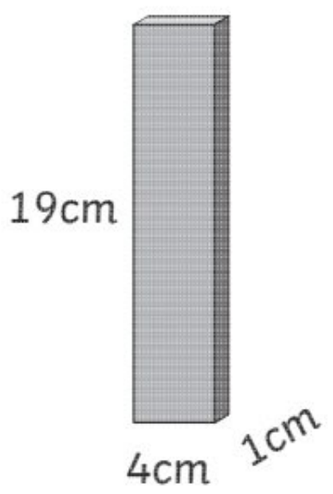
Volume = **64cm³**

11.



Volume = **105cm³**

12.



Volume = **76cm³**

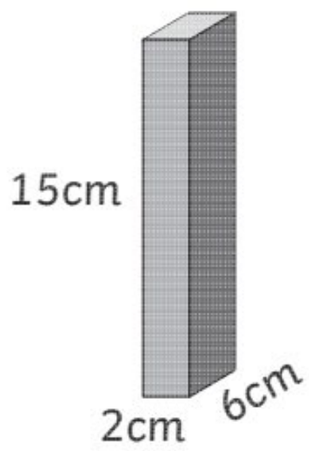
Challenge

A box supplier maRes 3 small boxes with a volume of 100cm³. What could be the dimensions of the boxes?

Calculate Volume of Cuboid Activity Sheet (2) **Answers**

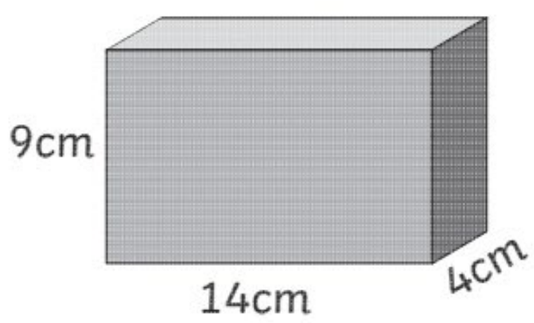
Calculate the volume of the following cuboids.

1.



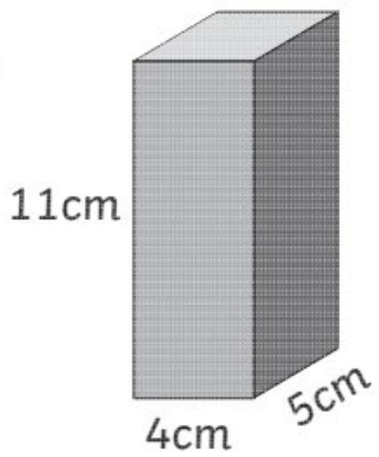
Volume = **180cm³**

2.



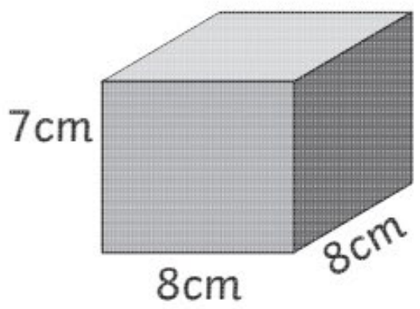
Volume = **504cm³**

3.



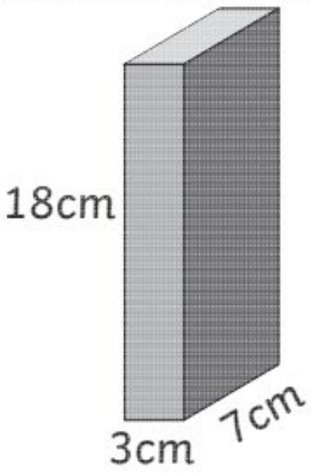
Volume = **220cm³**

4.



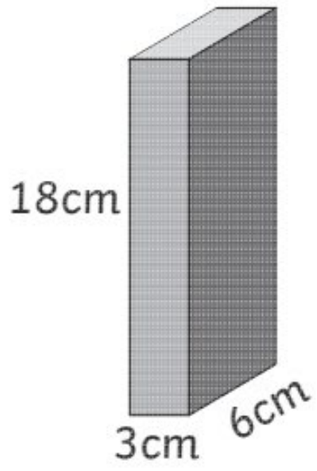
Volume = **448cm³**

5.



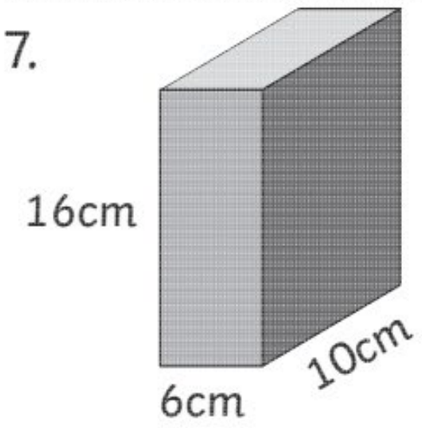
Volume = **378cm³**

6.



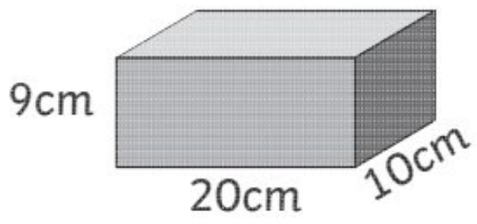
Volume = **324cm³**

7.



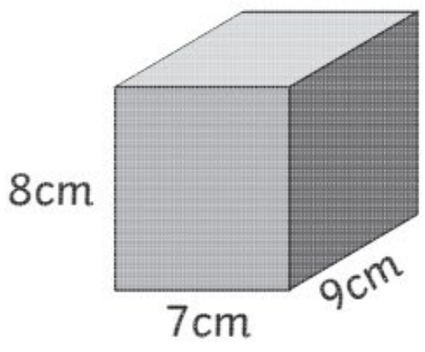
Volume = **960cm³**

8.



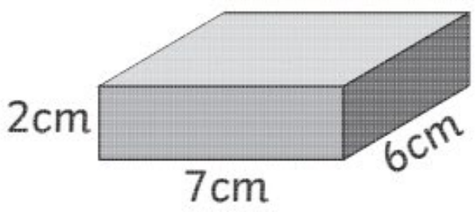
Volume = **1800cm³**

9.



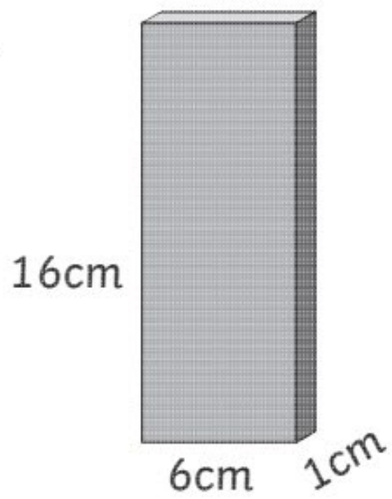
Volume = **504cm³**

10.



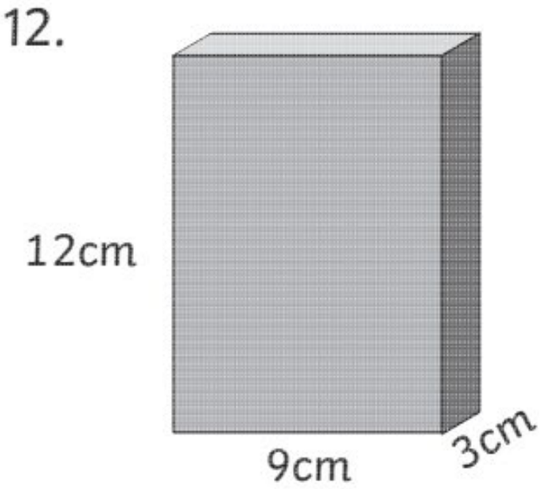
Volume = **84cm³**

11.



Volume = **96cm³**

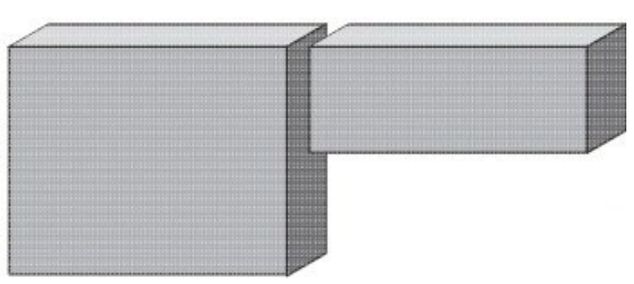
12.



Volume = **324cm³**

Challenge

A swimming pool is made of 2 cuboid spaces with a total volume of 210m³. What could be the dimensions of the pool?

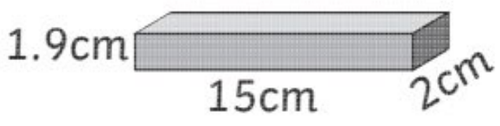


Possible answer: The pool is Sm wide, 14m long. Shallow end is Sm x 7m x 2m deep; deep end is Sm x 7m x 4m deep.

Calculate Volume of Cuboid Activity Sheet (1) Answers

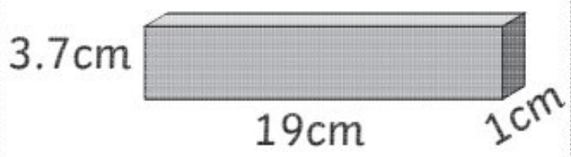
Calculate the volume of the following cuboids.

1.



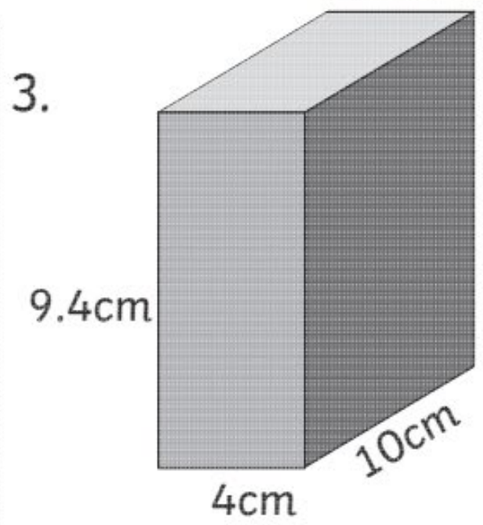
Volume = **57cm³**

2.



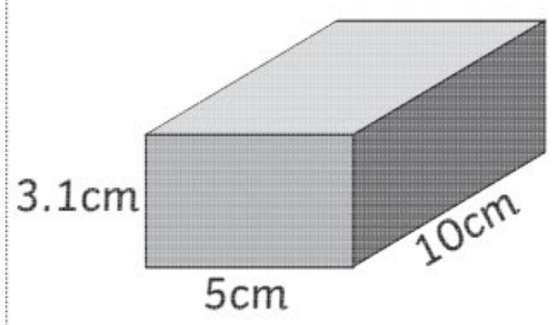
Volume = **70.3cm³**

3.



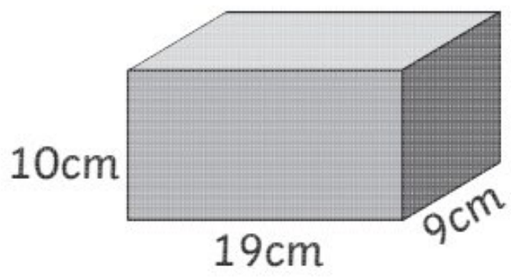
Volume = **376cm³**

4.



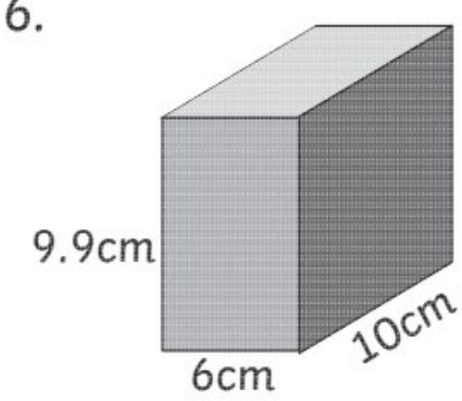
Volume = **155cm³**

5.



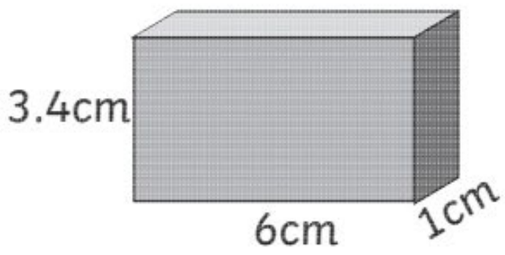
Volume = **1710cm³**

6.



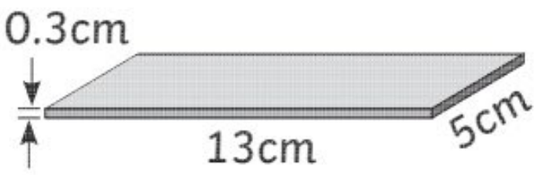
Volume = **594cm³**

7.



Volume = **20.4cm³**

8.



Volume = **19.5cm³**

9.

Volume = **236cm³**

10.

Volume = **39.6cm³**

11.

Volume = **316.8cm³**

12.

Volume = **192.5cm³**

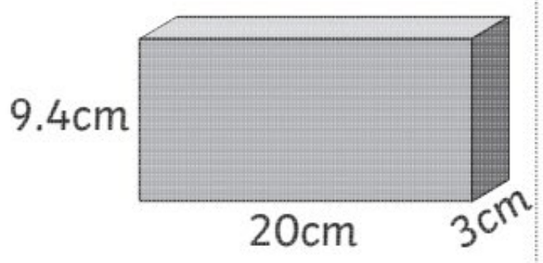
Challenge

A box supplier is astced to matce a cube-shaped box with a volume of 16cm³. To the nearest 1 decimal place, what could be the dimensions of the box? **Answer 2.5cm**

Calculate Volume of Cuboid Activity Sheet (2) **Answers**

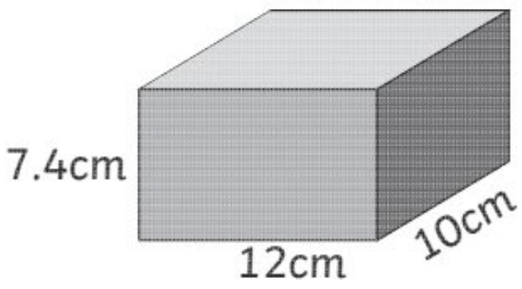
Calculate the volume of the following cuboids.

1.



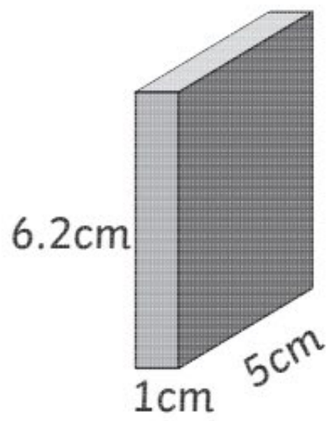
Volume = **564cm³**

2.



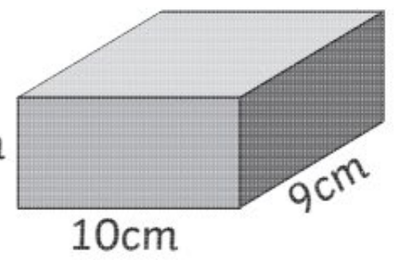
Volume = **888cm³**

3.



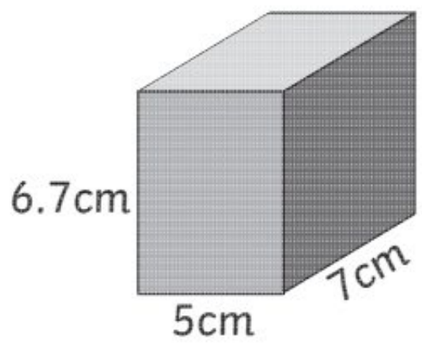
Volume = **31cm³**

4.



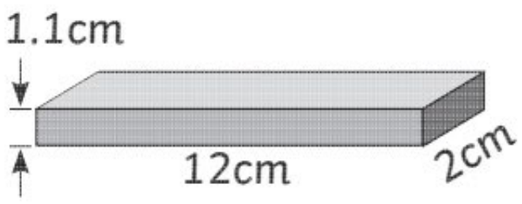
Volume = **432cm³**

5.



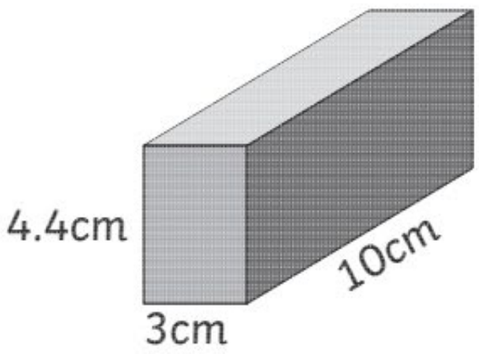
Volume = **234.5cm³**

6.



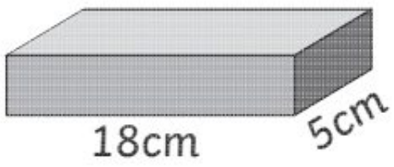
Volume = **26.4cm³**

7.



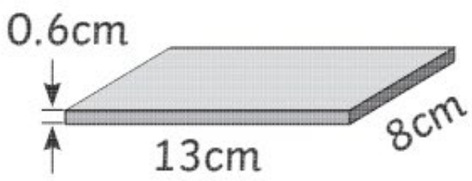
Volume = **132cm³**

8.



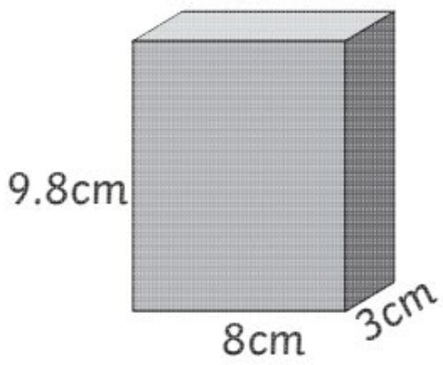
Volume = **324cm³**

9.



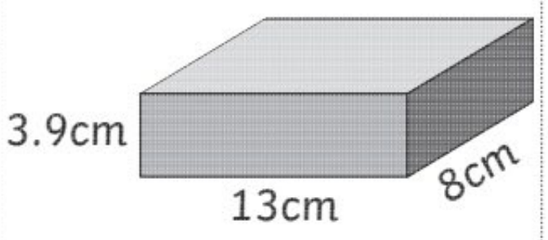
Volume = **62.4cm³**

10.



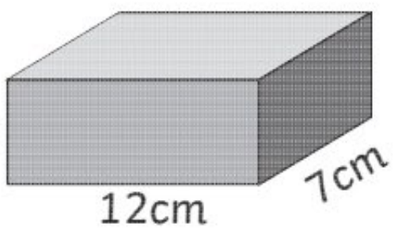
Volume = **235.2cm³**

11.



Volume = **405.6cm³**

12.



Volume = **403.2cm³**

Challenge

A swimming pool has a total volume of 180m³. The pool is 2.5m deep, and its length is twice its width. The pool is tiled on each side and at the bottom. What is the surface area of the tiles?

Answer 162m²

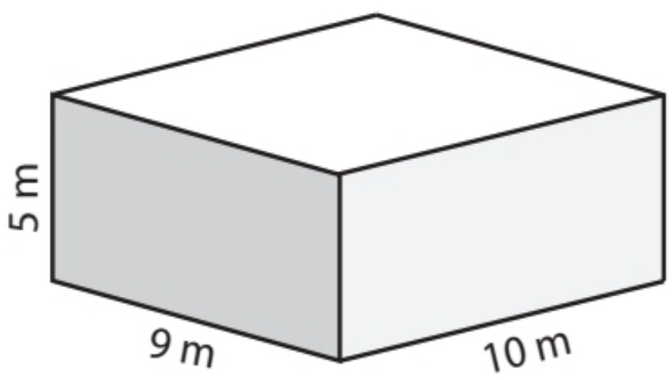
Name: _____ Score: _____

Answer key

ES2

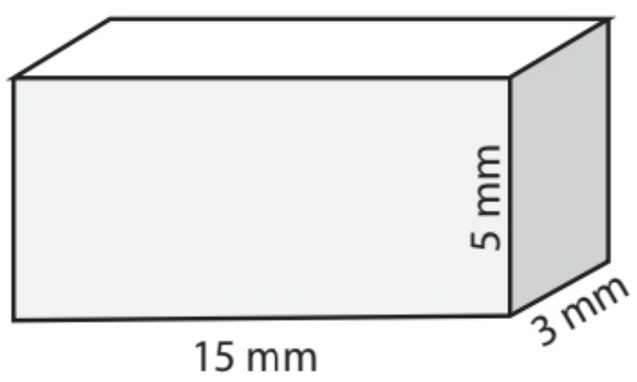
Surface Area - Rectangular Prism

1)



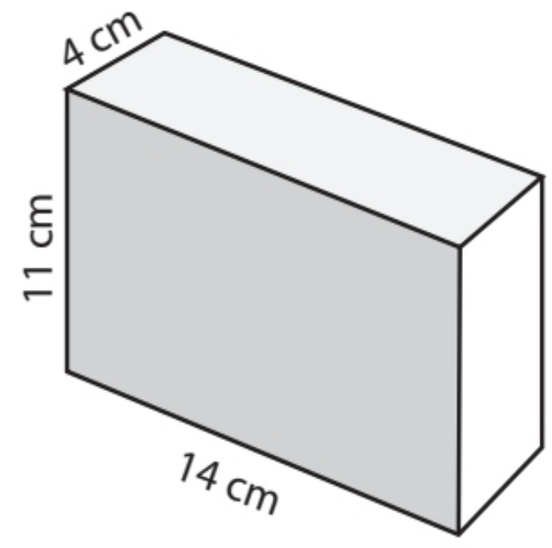
Surface Area = **370 m²**

2)



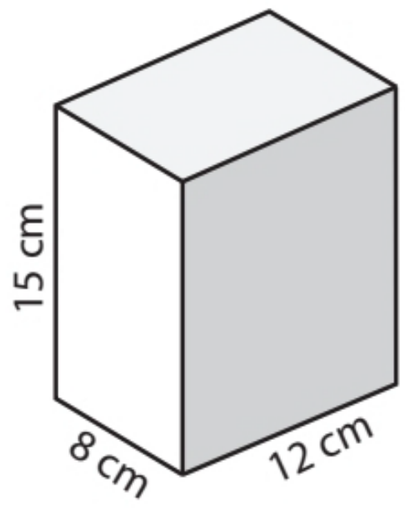
Surface Area = **270 mm²**

3)



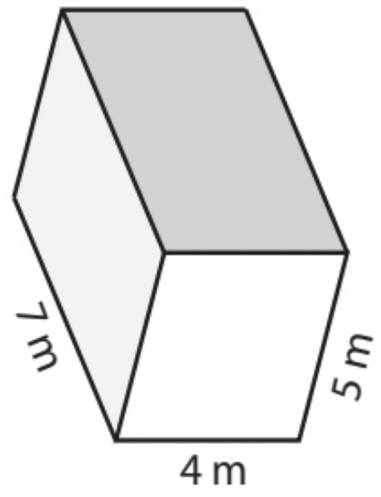
Surface Area = **508 cm²**

4)



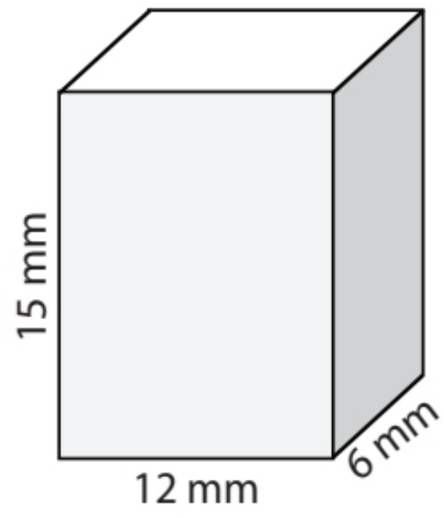
Surface Area = **792 cm²**

5)



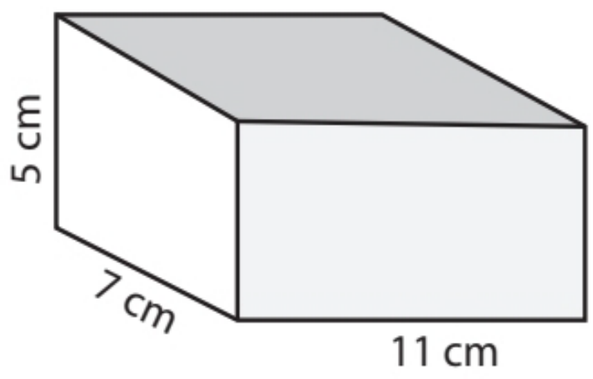
Surface Area = **166 m²**

6)



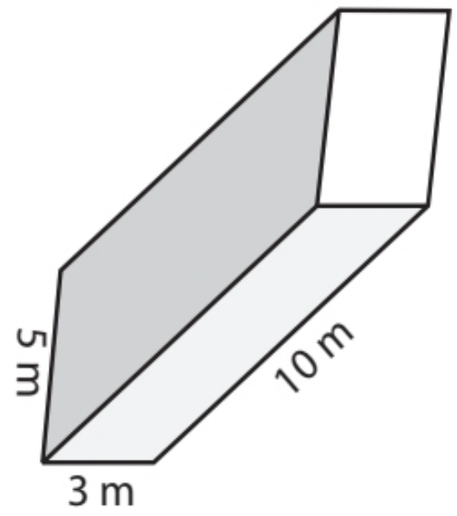
Surface Area = **684 mm²**

7)



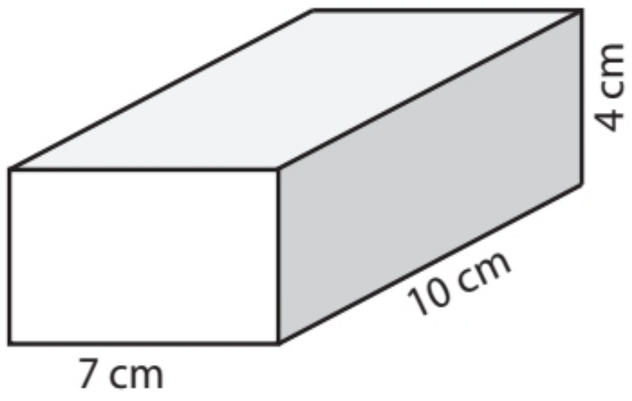
Surface Area = **334 cm²**

8)



Surface Area = **190 m²**

9)



Surface Area = **276 cm²**

10) A box in the shape of rectangular prism has a dimension of 30 meters x 27 meters x 28 meters. What is the surface area of the box?

Surface Area = **4812 m²**

Comprehension Test 13

Q1 **C**

In the *North country*

Q2 ***B***

Climb up chimneys

Q3 ***D***

Playing with his friends

Q4 *A*

Bravely

Q5 ***E.***

A *master chimney-sweep*

Q6 ***B***

Simile

Q7 ***D***

Tom was a good businessman and always polite to the customers

Q8 **a**

Adjective

Q9 *A*

It disgusted him

Q10 **C**

To suspend fighting

Comprehension Test 14

Q1 ***B***

Treasure

Q2 ***A***

Dust them

Q3 **C**

They were *far* too *particular*

Q4 ***D***

He *looked over* the *wall*

Q5 ***E.***

Adjective

Q6 ***A***

Laughed

Q7 ***E.***

He *was going in for* tea

Q8 ***B***

Their dog

Q9 ***A***

Noun

Q10 **C**

Proper noun

TYPE TWELVE:

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

PAGES 60-64 -ASSESSMENT TEST 7

1. **A** - *In the passage it says that the Ancient Olympic Games "took place in a stadium in the valley of Olympia* **?**
2. **D** – *In the passage it says that the winners were "presented with a special crown made from olive leaves".*
3. **A** - *In the passage it says that "The games started with worship"in honour of Zeus.*
4. **D** - *In the passage it says that the hoplite race was "challenging"because "the runners had to wear armour".*
5. **C** - *In the passage it says that the Olympic Games were "held to honour Zeus, king of the gods"- there is no mention of a king of the Greeks.*
6. **D** - *"to honour Zeus" means 'to praise Zeus' - both mean 'to show your admiration'.*
7. **B** - *"oath" means 'promise'. Both words mean an assurance of truth'.*
8. **A** - *"strength" means 'power'. Both words mean 'being strong'.*
9. **straight** - *'Curly' means 'wavy'. whereas 'straight' means 'without curls or waves'.*
10. **historic** - *'Current' means 'from the present'. whereas 'historic' means 'from the past'.*
11. **rush** - *'Dawdle' means 'take your time'. whereas 'rush' means act quickly'.*
12. **calm** - *'Manic' means 'chaotic'. whereas 'calm' means 'peaceful'.*
13. **congested** - *'Empty' means 'clear: whereas 'congested' means 'blocked'.*
14. **straightforward** - *'Puzzling' means 'confusing'. whereas 'straightforward' means 'simple'.*
15. **reasonable** - *'Expensive' means 'costly'. whereas 'reasonable' means 'inexpensive'.*
16. **unfriendly** - *'Sociable' means 'friendly'. whereas 'unfriendly' means 'unsociable'.*
17. **eccentric** - *'Ordinary' means 'normal'. whereas 'eccentric' means 'unconventional'.*
18. **departure** - *'Return' means 'the act of coming back'. whereas 'departure' means 'the act of leaving'.*
19. **active** - *Both words mean 'lively'.*
20. **foolish** - *Both words mean 'showing a lack of common sense'.*
21. **specific** - *Both words mean 'particular'.*
22. **empty** - *Both words mean 'containing nothing'.*
23. **mistake** - *Both words mean a fault'.*
24. **game** - *Both words mean acontest'.*
25. **combine** - *Both words mean 'mix'.*
26. **orderly** - *Both words mean 'tidy'.*
27. **bike** - *The other four are vehicles that are powered by motors.*
28. **piano** - *The other four are wind instruments.*
29. **cardigan** - *The other four are mainly worn outdoors.*
30. **rubber** - *The other four are used to make marks on paper.*
31. **disapprove** - *The other four are positive feelings.*
32. **comma** -*The other four aretypes of word.*
33. **A** - *'The school netball team are celebrating **some** great news.'*
34. **B** - *'They have **won** the finals'*
35. **A** - *'they made us all **believe** that they had lost.'*
36. **C** - *'We knew they were **tricking** us though'*
37. **B** - *'the final match of the **tournament** had been a real challenge'*
38. **B** - *'The runners-up **were** very tough to beat'*
39. **C** - *'they **had** won the championships last year.'*
40. **A** – *'the **audience** was dazzled'*
41. **A** - *'the skill **demonstrated** by both teams'*
42. **B** - *'nobody could tell who would win until the very last minute'*

Test 12

1. the snow sparkled in the sunshine
2. the garden was filled with beautiful flowers
3. she enjoyed gardening in the summer
4. she spent the afternoon reading her book
5. my Mum's new car is luxurious
6. she baked a birthday cake for me
7. omelettes are made out of eggs
8. I love cycling to school in the summer
9. I walk my dog every morning
10. I visit my grandmother on Sunday

ASSESSMENT TEST 6

Section 1 — Complete the Pair

1. A

The figure gets larger and its shading changes to white spots on a black background.

2. B

The central shape becomes larger and moves behind the other shapes.

---

3. A

The figure reflects across.

4. C

The top circle disappears.

5. D

The figure rotates 180degrees and changes shading. A larger white version of the same shape appears behind it.

Section 2 – Find the Figure Like the First Three

1. B

All figures must have a circle Inside a large white shape.

2. D

In allfigures, there must be a black circle in the middle ofthe square andanother circle on one ofthe squares comers.

3. D

In all figures, the upper bodyand lower fins of the shark must be shaded the same.

4. D

In all figures. there should be twoshapes overlapping each other. One of the shapes must be hatched and must be at the back ofthe figure.

5. B

In all figures, the two arrows must point in the same direction and be on either side of the zigzag line. The arrows must have op ☐e lyshaded heads and tails.

Section 3 – Reflect the Figure

1. C

In option A the black circles are in front of the white shape. Option Bhas three black circles. Option Dis a 60 degree clockwise rotation.

2. D

Option A has been reflected, but the smaller shape has been rotated. In options Band C. the shapes are wrong and option C also has the wrong shading.

3. D

Option A is a 90degree anticlockwise rotation. In option B, the lowest white rectangle is on the wrong side. In option C. a small white rectangle is missing.

4. D

Options A, Band C are the wrong shape

5. A

Option Bhas been rotated 180degrees (excluding the crown). In option C. the crown has not been reflected. In option D. the crown has been rotated 180 degrees.

Section 4 - Complete the Series

1. C

The number of horizontal lines increases byone in each series square.

2. C

In each series square, the white ellipse turns black and a new white ellipse appears.

3. B

The arrow and the circle rotate together 90degrees clockwise in each series square. The shading ofthe circle alternatesbetween black and white.

4. C

In each series square. one 'book' is taken away from the right-hand side ofthe figure.

5. D

The black and grey shadings move up one shape In each series square. (When a shading reaches the top shape, it starts again in the bottom shape.)

Section 5 – Look at the Figure from the Top

1. D

There is a line ofthree blocks on the right-hand side of the figure, which rules outoptions A and B. There should be four blocks visible from above, which rules out option C.

2. C

There are two blocks at the front ofthe figure, which rules out options Aa,nd D There should be five blocks visible from above, which rules out option B

3. B

There should be four blocks visible from above, which rules out optionsA and C. There should be two blocks on the right-hand side of the figure, which rules out option D.

4. D

There should be four blocks visible from above, which rules out options A and C. There is only one block on the right ofthe figure, which rules out option B.

Section 6 — Complete the Gi:,id

1. A

Working from left to right, the star

turns grey and gains a point.

2. E

Working from left to right, the figure reflects across and becomes white with black dots.

3. D

In each row. the figure in the right-hand grid square is made from the lines in the left-hand square and the floiver from the middle grid square.

4. B

Working from left to right, the figure rotates 90 degrees clockwise and gains one dot.

Workout the volume of the shapes with the following dimensions

	Length	Width	Height	Volume
1)	4cm	8cm	3cm	$96cm^3$
2)	11mm	5mm	2cm	$11cm^3$
3)	2.5m	10m	5cm	$1.25m^3$

Workout the following:

		Mode	Range	Mean	Median
4)	3, 4, 8, 1	None	7	4	3.5
5)	14, 11, 11	11	3	12	11
6)	4, 3, 9, 9, 3	3,9	6	5.6	4

7) Round 2.598 to two decimal places

2.60

8) Round 3,251 to the nearest hundred

3300

9) Add 137 minutes to 11:15am

1:32pm

10) Add 84 minutes to 3:47pm

5:11pm

Vocabulary 12

Exercise A

1. Irritable
2. Significance
3. Generate
4. Grenade
5. Album
6. Refuse
7. Penetrate
8. Oblivion
9. Dismissal
10. Misbehave

Exercise B

1. Penetrate
2. Oblivion
3. Album
4. Significance
5. Dismissal
6. Irritable
7. Generate
8. Refuse
9. Grenade
10. Misbehave