

STIRLING TUITION
SEAG
Entrance Assessment



STIRLING TUITION
WWW.STIRLINGTUITION.COM

Practice Paper 16

(Cut Answer Sheet from Back Page)

Read this passage to yourself.

Extract from The Adventures of Maya the Bee by Waldemar Bonseld

The little bee looked and saw two human beings sitting on a bench in the shadows cast by the moonlight—a boy and a girl, the girl with her head leaning on the boy's shoulder, and the boy holding his arm around the girl as if to protect her. They sat in complete stillness, looking wide-eyed into the night. It was as quiet as if they had both gone to sleep. Only from a distance came the chirping of the crickets, and slowly, slowly the moonlight drifted through the leaves.

Answer this question. Choose **one** answer from the options below and mark its letter on your answer sheet.

P4

Which of the following is true about the humans?

- A They are sleeping.
- B They are holding hands.
- C The boy is leaning against the girl.
- D The girl is leaning against the boy.
- E They are sitting on the grass.

For this question, you have to write your answer in the box provided on your answer sheet (box P5).

P5

Which **word** from the passage means the same as “floated”?

Drifted



Maths – Practice Test

P6

Toby drove to Omagh. He spent 51 minutes in Omagh. Toby left Omagh at 9:29 am.

When did he arrive in Omagh?

A 08:42

B 10:29

C 08:38

D 09:17

E 10:20

$$\begin{array}{r} 8:29 \\ 09:29 \\ - 51 \\ \hline 08:38 \end{array}$$

P7



$$1\text{m} = 100\text{cm}$$

$$15.3\text{m} = 1530\text{cm}$$

$$\begin{array}{r} 051 \\ 30 \overline{)1530} \end{array}$$

A piece of ribbon is 15.3 m long. It is cut in to 30 equal pieces.

How long is each piece of ribbon?

A 15

B 51

C 30

D 17

E 153

P8

There are 530 pages in a book. A pupil has read 40% of the book. The pupil reads complete pages and doesn't skip pages.

How many pages are left to read?

$$100 - 40 = 60$$

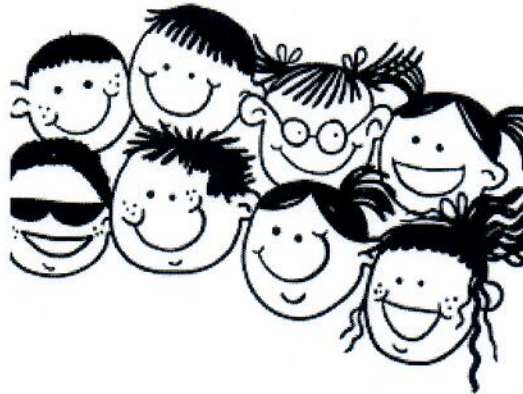
60% of 530

$$\begin{array}{r} \times 6 \\ \hline \div 10 \end{array}$$
$$\begin{array}{r} 53 \\ \times 6 \\ \hline 318 \end{array}$$

- A** 318 **B** 530 **C** 212 **D** 428 **E** 53

For these questions you have to **write your answers** in the boxes provided on your answer sheet (box P9 and P10). The units of measurement have been given.

P9



A school has 7 classes. Each class has 24 pupils. On Monday all the pupils are brought together in the playground. They are then divided up into groups. There are 8 pupils in each group.

How many groups are there?

$$\begin{array}{r} 24 \\ \times 7 \\ \hline 168 \end{array}$$

$$\begin{array}{r} 21 \\ 8 \overline{)168} \end{array}$$

21

P10

A drawer contains 81 pairs of purple socks and 46 individual green socks.

How many socks are in the drawer altogether?

$$\begin{array}{r} 81 \\ \times 2 \\ \hline 162 \end{array}$$

$$\begin{array}{r} 162 \\ + 46 \\ \hline 208 \end{array}$$

208



English – Main Test

In this exercise there are some mistakes with **punctuation** or use of **capital letters**. On each numbered line there is either **one** mistake or **no** mistake. Find the group of words with the mistake in it and **mark its letter on your answer sheet**. If there is no mistake, mark **N**.

Punctuation Exercise

1 I love all different types of books: fantasy, horror, thrillers and science fiction. N

↑ A ↑↑ B ↑↑ C ↑↑ D ↑

2 While the chicken was cooking, the potatoes and vegetables were roasting in the oven.

↑ A ↑↑ B ↑↑ C ↑↑ D ↑

3 "Come here quickly!" Maya shouted excitedly. I think we've finally found the treasure!"

↑ A ↑↑ B ↑↑ C ↑↑ D ↑

4 The school holds an event every year to raise money for the local childrens hospital.

↑ A ↑↑ B ↑↑ C ↑↑ D ↑

5 You're Your'e going to be sick if you don't stop eating all the cakes, biscuits and sweets.

↑ A ↑↑ B ↑↑ C ↑↑ D ↑

In this exercise you have to choose the **best** word, or **group of words**, to complete each numbered line so that the passage makes sense and is written in correct English. Choose the best answer and **mark its letter on your answer sheet**.

Grammar Exercise

6

Cheer up! You never know what's

about around on in beside the corner!
A B C D E

7

You should go to a an this the any
A B C D E

Natural History Museum in London – it's great!

8

Let's try to cheer Daniel up today. He is feeling a bit

blue green yellow red pink.
A B C D E

9

She said that she would come to the party

because and or so although she didn't seem very excited about it.
A B C D E

10

That is my friend Zara standing over by the window. Can you see

him them her it us ?
A B C D E

In this exercise there are some **spelling** mistakes. On each numbered line there is either **one** mistake or **no** mistake. Find the group of words with the mistake in it and **mark its letter on your answer sheet**. If there is no mistake, mark **N**.

Spelling Exercise

- 11 I think that it is important for every child to learn a foreign language at primary school.
foreign
↑ A ↑↑ B ↑↑ C ↑↑ D ↑
- 12 Write a minimum of two hundred words for your class presentation next Wednesday.
minimum
↑ A ↑↑ B ↑↑ C ↑↑ D ↑
- 13 You need to thank Jamie – he is the person who is responsible for the team's success.
responsible
↑ A ↑↑ B ↑↑ C ↑↑ D ↑
- 14 He is extremely clever, but he is not the most likeable person in my opinion.
likeable
↑ A ↑↑ B ↑↑ C ↑↑ D ↑
- 15 I know you are nervous but if you have confidence in yourself, you will do well.
confidence
↑ A ↑↑ B ↑↑ C ↑↑ D ↑

Read the **whole** passage carefully, then answer the questions that follow.

Extract from The Adventures of Maya the Bee by Waldemar Bonseld

1. To-morrow you will fly out of the hive, an older bee will accompany you. At first you
2. will be allowed to fly only short stretches and you will have to observe everything, very
3. carefully, so that you can find your way back home again. Your companion will show you
4. the hundred flowers and blossoms that yield the best nectar. You'll have to learn them
5. by heart. This is something no bee can escape doing.—Here, you may as well learn the
6. first line right away—clover and honeysuckle. Repeat it. Say 'clover and honeysuckle.'

7. "I can't," said little Maya. "It's awfully hard. I'll see the flowers later anyway."

8. Cassandra opened her old eyes wide and shook her head.

9. "You'll come to a bad end," she sighed. "I can foresee that already."

10. "Am I supposed later on to gather nectar all day long?" asked Maya.

11. Cassandra fetched a deep sigh and gazed at the baby-bee seriously and sadly. She
12. seemed to be thinking of her own toilsome life—toil from beginning to end, nothing but
13. toil. Then she spoke in a changed voice, with a loving look in her eyes for the child.

14. "My dear little Maya, there will be other things in your life—the sunshine, lofty green
15. trees, flowery heaths, lakes of silver, rushing, glistening waterways, the heavens blue
16. and radiant and perhaps even human beings the highest and most perfect of Nature's
17. creations. Because of all these glories your work will become a joy. Just think—all that
18. lies ahead of you, dear heart. You have good reason to be happy."

19. "I'm so glad," said Maya, "that's what I want to be."

20. Cassandra smiled kindly. In that instant—why, she did not know—she conceived a
21. peculiar affection for the little bee, such as she could not recall ever having felt for any
22. child-bee before. And that, probably, is how it came about that she told Maya more
23. than a bee usually hears on the first day of its life. She gave her various special bits of

24. advice, warned her against the dangers of the wicked world, and named the bees' most
25. dangerous enemies. At the end she spoke long of human beings, and implanted the first
26. love for them in the child's heart and the germ of a great longing to know them.

27. "Be polite and agreeable to every insect you meet," she said in conclusion, "then you
28. will learn more from them than I have told you to-day. But beware of the wasps and
29. hornets. The hornets are our most formidable enemy, and the wickedest, and the wasps
30. are a useless tribe of thieves, without home or religion. We are a stronger, more
31. powerful nation, while they steal and murder wherever they can. You may use your
32. sting upon insects, to defend yourself and inspire respect, but if you insert it in a warm-
33. blooded animal, especially a human being, you will die, because it will remain sticking in
34. the skin and will break off. So do not sting warm-blooded creatures except in dire need,
35. and then do it without flinching or fear of death. For it is to our courage as well as our
36. wisdom that we bees owe the universal respect and esteem in which we are held. And
37. now good-by, Maya dear. Good luck to you. Be faithful to your people and your queen."

38. The little bee nodded yes, and returned her old monitor's kiss and embrace. She went to
39. bed in a flutter of secret joy and excitement and could scarcely fall asleep from curiosity.
40. For the next day she was to know the great, wide world, the sun, the sky and the
41. flowers.

42. Meanwhile the bee-city had quieted down. A large part of the younger bees had now
43. left the kingdom to found a new city; but for a long time the droning of the great swarm
44. could be heard outside in the sunlight.

Please answer these questions. (Look at the passage again if you need to.) You should choose the **best** answer and mark its letter on your answer sheet.

16

What does the story start with?

- A description
- B narration
- C direct speech
- D flashback
- E question

17

Look at lines 1 – 6. Why will Maya need to “observe everything, very carefully”?

- A She will have to take a test.
- B To find her way back home.
- C She is only young and she needs to learn.
- D She is not very clever.
- E She is trying to escape.

18

Look at lines 7-10. Why does Cassandra shake her head?

- A She thinks that Maya is being brave.
- B She thinks that Maya is being funny.
- C She agrees with what Maya is saying.
- D She feels sorry for Maya.
- E She is shocked by Maya’s response.

19

Look at lines 14 – 18. Why does Maya have “good reason to be happy”?

- A Because there are many wonderful things in the world.
- B Because Cassandra loves her.
- C Because humans love bees.
- D Because bees love to work.
- E Because she lives beside a beautiful lake.

20

“Be polite and agreeable to every insect you meet,” (line 27)

Why should Maya be polite to the insects?

- A Because they could hurt her.
- B Because they are more important than her.
- C Because bees are always polite.
- D Because she can learn from them.
- E Because insects and bees are friends.

21

Look at lines 29-31. Which of the following is true about hornets and wasps?

- A They live with the bees.
- B They are thieves and murderers.
- C They are lazy and stupid.
- D They are friends with bees.
- E They are more powerful than bees.

22

“do not sting warm-blooded creatures except in dire need” (line 34)

Why does Cassandra give Maya this warning?

- A Because if she stings a human they will be angry.
- B Because if she stings a human they will be sad.
- C Because if she stings a human they will take all the bees' honey.
- D Because if she stings a human she will die.
- E Because stinging humans is wrong.

For these questions you have to **write your answers**, neatly, in the boxes provided on your answer sheet.

23

According to Cassandra, who are the most perfect of all Nature's creations?

Human beings

24

Why do a large number of young bees leave the kingdom?

to found a new city

25

Which word in line 12 means the same as "hard work"?

Toil

26

Which word in line 35 means the same as "bravery"?

Courage

27

Which part of speech is "look" as it appears in the passage? (line 13)

Noun

28

Which one part of speech are the following as they appear in the passage?

glistening (line 15) **radiant** (line 16) **wicked** (line 24) **useless** (line 30)

Adjectives

Maths – Main Test

29

The mini-cheese in a single packet weigh 79g. A multipack contains 42 single packets. Derek is having a cheese party. He empties the contents of all the packets in a multipack into a large bowl.

What is the weight of the cheese in the bowl in kilograms?

$$1 \text{ kg} = 1000 \text{ g}$$

$$3.318 \div 1000 =$$

$$\begin{array}{r} 31 \\ \times 79 \\ \hline 279 \\ 3180 \\ \hline 3318 \end{array}$$

A 3318g

B 3.429kg

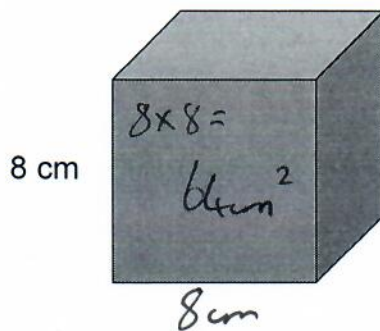
C 4.279kg

D 3.318kg

E 3429kg

30

Look at the cube below. Each side is 8 cm long.



$$1 = 64 \text{ cm}^2$$

6 sides

$$\begin{array}{r} 2 \\ \times 64 \\ \hline 128 \\ 384 \\ \hline \end{array}$$

What is the total surface area of the cube?

A 64cm²

B 512cm²

C 96cm²

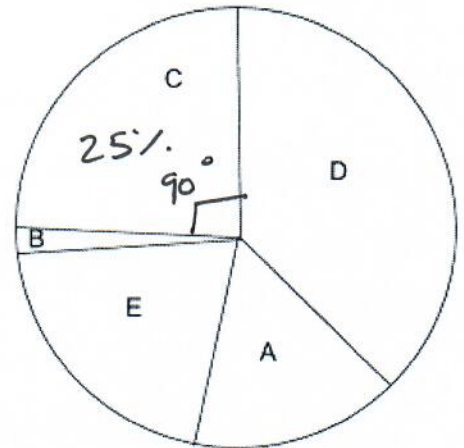
D 768cm²

E 384cm²

31

A sponge cake is made up of different ingredients. The table below shows the percentage of the sponge cake that is flour, sugar, butter, icing and other ingredients.

Substance	Percentage of sponge cake	Section of Pie Chart
Flour	37%	D
Sugar	21%	E
Butter	25%	C
Icing	8%	A
Other	2%	B



Which section of the pie chart represents butter?

A A

B B

C C

D D

E E

32

$$1\text{m} = 100\text{cm}$$

A dad is 1.78m tall. The mother is 156cm tall. Their daughter's height is exactly halfway between the dad's height and the mum's height.

How tall is the daughter in metres?

$$\begin{array}{r}
 178 \\
 +156 \\
 \hline
 334 \\
 2 \overline{) 334} \\
 \underline{167} \\
 1.67\text{ cm}
 \end{array}$$

A 1.64m

B 0.22m

C 1.67m

D 1.72m

E 3.34m

33

Jonny buys a book that costs £18.45. He pays with a £20 note. The shopkeeper gives him change. His change is made up of £1 coins, 10p coins and 1p coins.

What is the smallest number of coins that Jonny could receive?

- A 10 **B 11** C 12 D 13 E 14

$$\begin{array}{r} \overset{a}{1} \overset{a}{2} \overset{0}{0} \overset{0}{0} \\ - 18.45 \\ \hline \pounds 01.55 \end{array}$$

£1 = ① 10p = ⑤ 1p = ⑤

34

Look at the 6 cards below. Each card has a number on it.

- 1 8 27 64 125 216

The cards are placed in a box and the box is shaken so that the cards get mixed up. I choose a card at random and read the number on it. Look at the following five statements:

- A: The number is more than 8. $\frac{4}{6}$
 B: The number is a square number. $\frac{2}{6}$
 C: The number is a prime number. $\frac{0}{6}$
D: The number is a cubed number. $\frac{6}{6}$
 E: The number is even. $\frac{3}{6}$

Which of the statements above has the highest probability?

- A A B B C C **D D** E E

35

How many minutes are there in $9\frac{3}{5}$ hours?

$$9 \times 60 = 540$$

$$\frac{3}{5} \text{ of } 60 = 36$$

$$\begin{array}{r} 540 \\ + 36 \\ \hline 576 \end{array}$$

- A 540 B 600 C 936 D 935 **E 576**

36

Look at the five numbers below.

~~21~~ ~~52~~ (71) ~~81~~ ~~93~~ $\begin{array}{r} 31 \\ 3 \overline{)93} \end{array}$

3x9 *even* *9x9*

Which number is the prime number?

- (A) 71 B 93 C 27 D 52 E 81

37

Max needs 435 tiles to cover a floor. The shop only sells the tiles in packs of 21.

How many complete packs will Max need to buy to cover the floor?

- A 20 B 43 (C) 21 D 37 E 27

$$\begin{array}{r} 020r5 \\ 7 \overline{)145} \\ 3 \overline{)435} \end{array}$$

38

John is buying fish for his tank. He uses the rule below to work out the maximum number of fish he can keep in the tank.

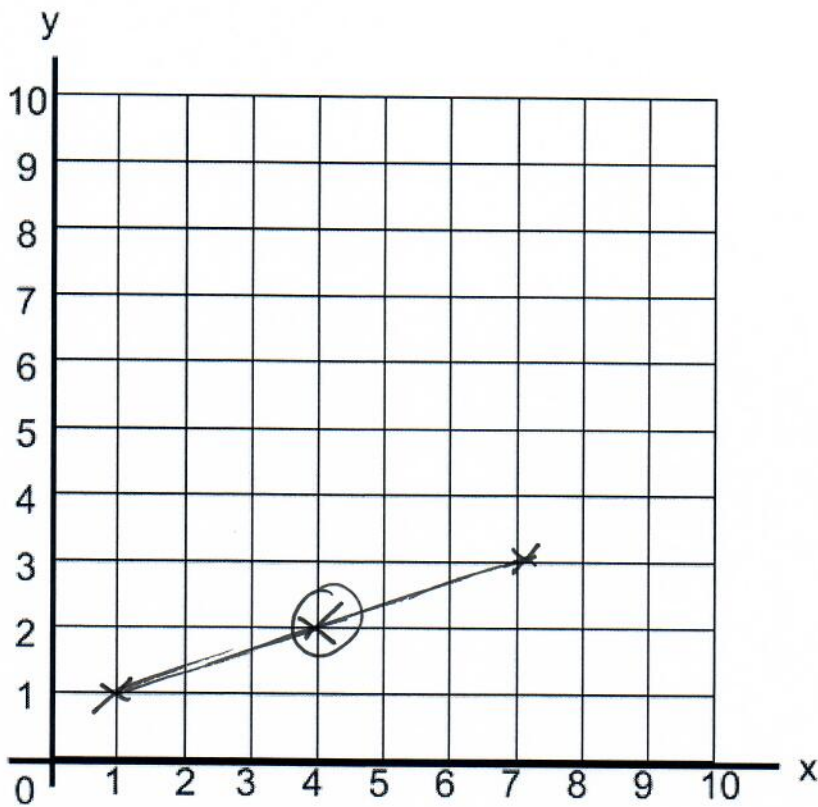
Maximum number of fish = Volume of tank in litres \div 9

What is the maximum number of fish John can keep in a tank of 1107 litres?

- A 112 (B) 123 C 119 D 127 E 95

$$\begin{array}{r} 0123 \\ 9 \overline{)1107} \end{array}$$

Look at the grid below. It will help you answer the question below.



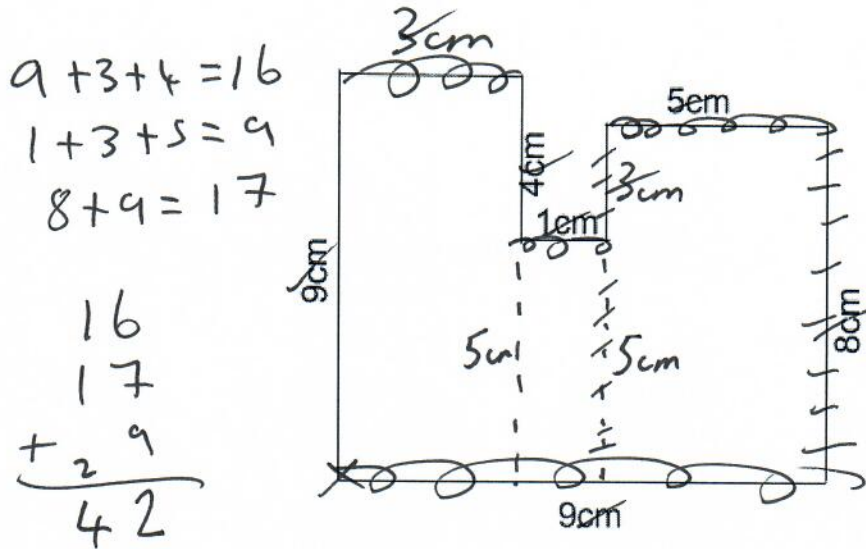
A line is drawn from the point (1,1) to the point (7,3).

What are the coordinates of the point halfway along this line?

- A** (4,2)
- B** (5,2)
- C** (3,2)
- D** (4,3)
- E** (4,1)

40

Look at the shape below.



What is the perimeter of the shape?

A 41cm

B 75cm

C 40cm

D 72cm

E 42cm

41

The temperature at noon on Monday is -4°C . The temperature increases by 3°C every 24 hours.

What is the temperature at noon on Friday?

A 6°C

B 9°C

C 7°C

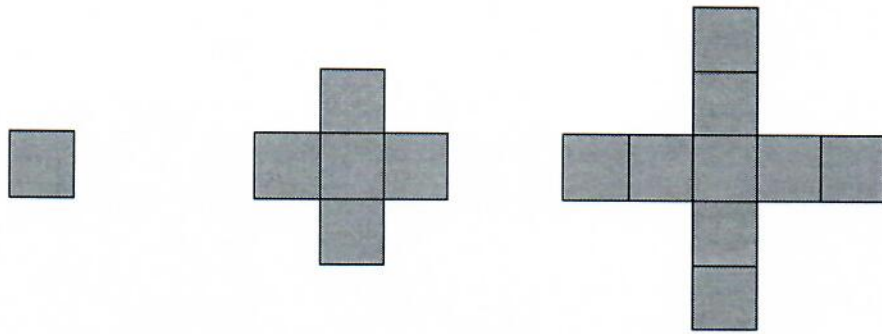
D 10°C

E 8°C

M	T	W	T	F
-4	-1	2	5	8
$+3$	$+3$	$+3$	$+3$	

42

Patterns are formed from square tiles. The first patterns in a sequence are shown below.



Pattern 1

Pattern 2

Pattern 3

1	2	3	4	5	6	7	8
1	5	9	13	17	21	25	29
	+4	+4	+4	+4	+4	+4	+4

How many tiles are needed to make the eighth pattern?

A 25

B 28

C 30

D 29

E 32

43



Five runners ran 400 m. The table below shows the time taken by each runner in seconds.

The smallest number is the fastest.

Runner A	Runner B	Runner C	Runner D	Runner E
47.06 secs	47.89 secs	47.76 secs	47.91 secs	47.10secs

Which runner was the fastest?

A A

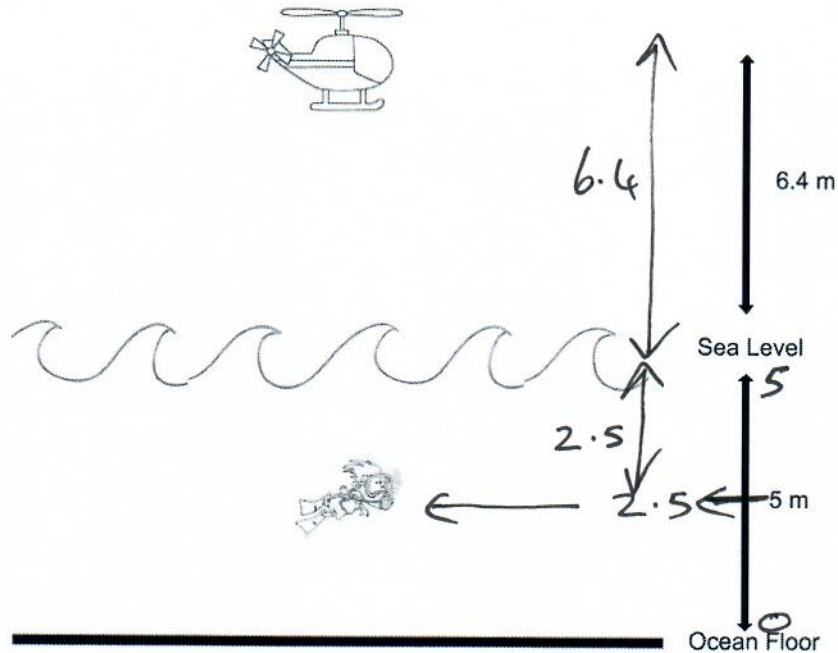
B B

C C

D D

E E

Look at the diagram below. There is a helicopter and a deep-sea diver in the diagram. The ocean floor is shown 5 metres below sea level. The helicopter is directly above the deep-sea diver.



The deep-sea diver is halfway between the ocean floor and sea level.

How high is the helicopter above the deep-sea diver?

- A 8.4m
- B 8.9m**
- C 7.4m
- D 5.7m
- E 11.4m

$$\begin{array}{r} 2.5 \\ + 6.4 \\ \hline 8.9 \end{array}$$

A parent won £60,000 in a lottery. They gave one fifth of the money to charity. Then they divided the remaining money equally between their six children.

How much money did each child receive?

- A £12000
- B £6000
- C £8000**
- D £10000
- E £5000

$$\begin{array}{r} 12000 \\ 5 \overline{) 60000} \end{array}$$

$$\begin{array}{r} 56000 \\ - 12000 \\ \hline 48000 \end{array}$$

$$\begin{array}{r} 08000 \\ 6 \overline{) 48000} \end{array}$$

46

A ball is dropped from a height of 315 cm. The ball always bounces up to a height of $\frac{4}{5}$ of its original height.

$$\times \frac{4}{5} \text{ of } 315$$

$$\begin{array}{r} 063 \\ 5 \overline{)315} \\ \underline{15} \\ 163 \\ \underline{130} \\ 252 \end{array}$$

How high does it bounce on its first bounce?

- A 95cm B 174cm C 63cm D 205cm **E 252cm**

47

The same ball referred to in Question 46 above is dropped again, but this time from a different height. It reaches a height of 404 cm on its first bounce.

What height was it dropped from?

- A 303cm B 323.2cm C 484.8cm **D 505cm** E 80.8cm

$$\div \frac{4}{5} \text{ of } \underline{\quad ? \quad} = 404$$

$$\begin{array}{r} 101 \\ 4 \overline{)404} \\ \underline{40} \\ 404 \\ \underline{404} \\ 0 \end{array}$$

48

Look at the five numbers below labelled A-E.

- A: 2.19 **B: 1.48** C: 1.56 **D: 2.31** E: 1.65

Which two numbers add to make **3.79**?

- A A+E B C+D C A+B **D B+D** E D+E

$$\begin{array}{r} 1.48 \\ + 2.31 \\ \hline 3.79 \end{array}$$

49

Two pupils, Gemma and Toby, are playing a game in school. In the game, for every 35 points you collect, you are given a prize from the teacher.

Gemma has 137 points. Toby has 8 prizes.

How many more points has Toby than Gemma?

$$\begin{array}{r} 4 \ 35 \\ \times 8 \\ \hline 280 \end{array} \quad \begin{array}{r} 710 \\ 280 \\ - 137 \\ \hline 143 \end{array}$$

- A 417 B 280 C 137 D 163 **E 143**

50

A pupil measured an angle. The angle was bigger than five eighths of a full turn but smaller than seven ninths of a full turn. Look at the five angles below.

A: 161°

B: 201°

C: 241°

D: 281°

E: 321°

$$\frac{\times 5}{\div 8} \text{ of } 360$$

$$\begin{array}{r} 045 \\ 8 \overline{) 360} \\ \underline{245} \\ 225 \end{array}$$

$$\frac{7}{9} \text{ of } 360 =$$

$$\begin{array}{r} 40 \\ 9 \overline{) 360} \end{array} \quad 40 \times 7 = 280$$

Which of the angles above could be the angle that pupil measured?

A A

B B

C C

D D

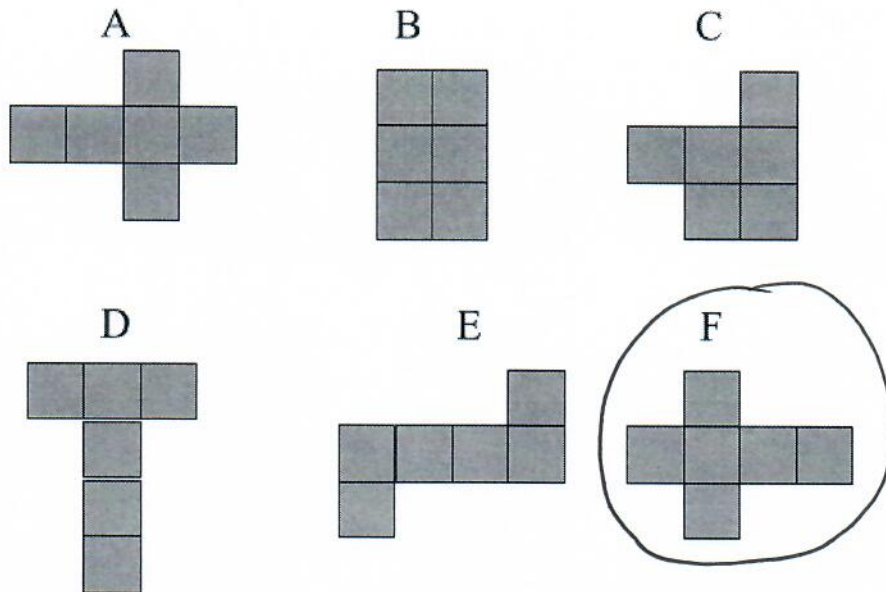
E E



For questions 51–56, you have to **write your answers** in the boxes provided on your answer sheet. The units of measurement have been given.

51

Look at the 6 shapes below.



A) Which shape is a reflection of shape A?

F

B) How many lines of symmetry does shape E have?

0

52

Look at the calculation below.

$$\begin{array}{r}
 20\text{ } \boxed{C_2} \\
 + \boxed{A_9} 89 \\
 \hline
 11\text{ } \boxed{B_9} 1
 \end{array}$$

What numbers do A, B and C need to be to make the calculation correct?

A = 9 B = 9 C = 2

53



$$\begin{array}{r} 3 \overline{) 15} \\ \underline{\times 6} \\ 8910 = \text{Total} \\ - 85 \\ \hline 05 \end{array}$$

A netball team played 6 games. They score the following number of goals in their first 5 games:

$$14 + 21 + 7 + 23 + 20 =$$

How many goals did they score in their last game if they have a mean average score of 15 goals at the end of the tournament?

$$\begin{array}{r} 50 \\ + 35 \\ \hline 85 \end{array}$$

5

54

Look at the equations below:

A) $772 \times 729 = 562788$

B) $0.772 \times 72.9 = \underline{56.2788}$

Using equation A above what is the answer to question B?

56.2788

55

One quadrilateral has two sets of parallel sides.

Another quadrilateral has two acute and two obtuse angles.

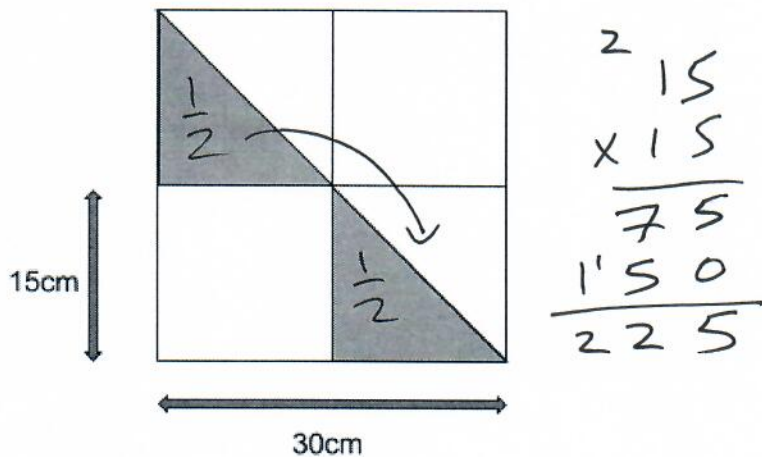
- A: The two quadrilaterals are a square and parallelogram ✓ ✓
- B: The two quadrilaterals are an isosceles trapezium and trapezium
- C: The two quadrilaterals are a right angle trapezium and a rhombus

Which one of the following statements is true?

A

56

Look at the diagram below. A large square is made up of 4 smaller squares. All the smaller squares are the same size. Each side of the large square is 30cm long. Each side of a smaller square is 15 cm long.



What is the area of the shaded part of the large square?

225 cm²