

**Do not turn over or open this booklet until told to do so**

# CEA

## Common Entrance Assessment

### Paper 2

**Saturday 28 November 2009**

**Time: 1 Hour**

**Please fill in the following from your admission card:**

Your Candidate Number \_\_\_\_\_

Your Assessment Centre \_\_\_\_\_

Your Date of Birth \_\_\_\_\_

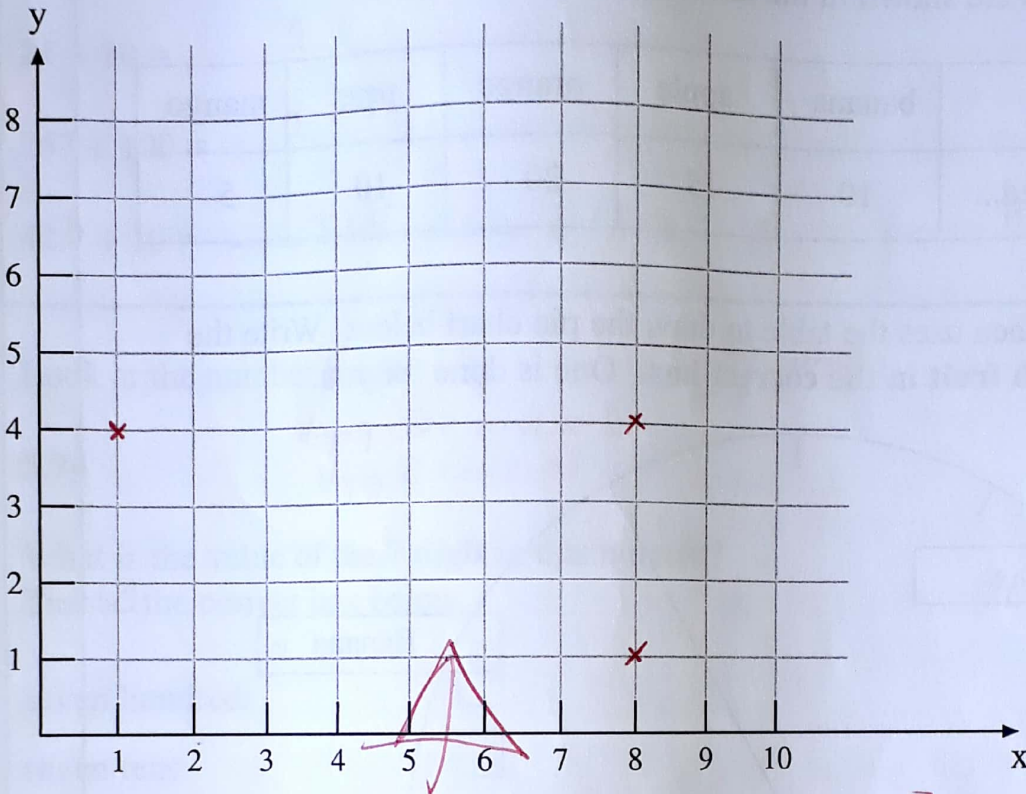
**Answer all 58 questions in this booklet**

NOT TO BE FILLED IN BY THE PUPIL			
MATHEMATICS			
Page	Marks	Score	Check
1	(2)		
2	(2)		
3	(2)		
4	(2)		
8	(2)		
9	(4)		
10	(2)		
13	(2)		
14	(2)		
15	(4)		
19	(2)		
20	(2)		
21	(4)		
<b>TOTAL 32</b>			

NOT TO BE FILLED IN BY THE PUPIL			
ENGLISH			
Page	Marks	Score	Check
6	(6)		
7	(2)		
11	(1)		
12	(4)		
17	(6)		
18	(4)		
22	(3)		
23	(5)		
24	(1)		
<b>TOTAL 32</b>			
<b>TOTAL SCORE</b>			



3. Look at the grid below.



Do not write in this column

(a) Plot the points  $(1, 4)$ ,  $(8, 4)$  and  $(8, 1)$  on the grid.

→ across then up ↑

(b) When a **fourth** point is added to the grid, the four points can be joined to form a **rectangle**. Write the **coordinates** of the fourth point in the space below.

All

$(1, 1)$

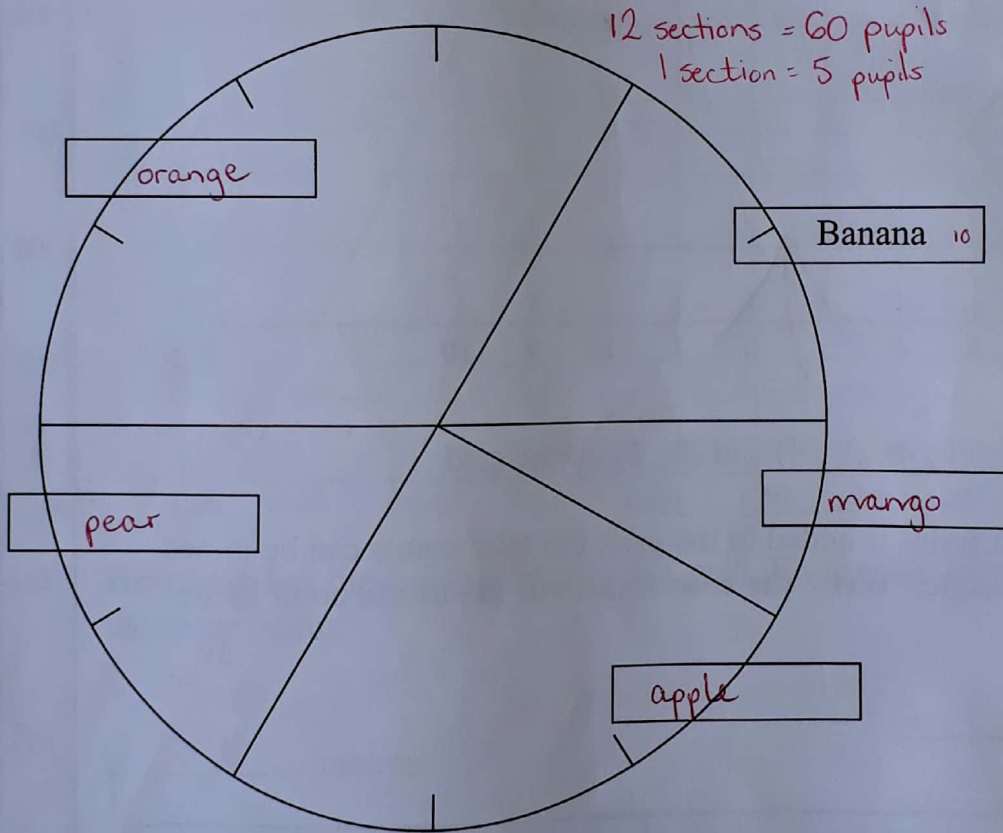
4. What time is **5 hours and 22 minutes earlier than noon**? Write your answer using the **12 hour clock** (am/pm), in the space below.

6:38 am

5. A teacher is carrying out a survey about healthy eating in school. She asks 60 pupils to choose the fruit they like best. Their choices are shown in the table below.

	banana	apple	orange	pear	mango
Number who liked...	10	15	20	10	5

The teacher then uses the table to draw the pie chart below. Write the name of each fruit in the correct box. One is done for you.



6. A school pays for:

$$\begin{array}{r} 25 \\ \times 240 \\ \hline \pounds 10.00 \end{array}$$

$$\begin{array}{r} 130 \\ \times 60 \\ \hline \pounds 78.00 \end{array}$$

$$\begin{array}{r} 50 \\ \times 4 \\ \hline \pounds 2.00 \end{array}$$

25 pens at 40 pence each  
130 rulers at 60 pence each  
and 4 notebooks at 50 pence each.

Find the **total amount** the school will have to pay.  
Write your answer in the space below.

£ 90.00

Do not write in this column

7. Complete the following calculations. Write your answers in the spaces below.

$24 \div 10 = \underline{2.4}$

$257 \div 100 = \underline{2.57}$

$42.7 \div 10 = \underline{4.27}$

All

Do not write in this column

8. Look at the number below.

*units tenths hundredths*  
*- U.th*

5.74

What is the value of the **7 digit** in this number?

Tick  the correct box below.

seven hundreds

seven tens

seven units

seven tenths

seven hundredths

seven thousandths

### My Brother Bert

Pets are the hobby of my brother Bert.  
He used to go to school with a mouse in his shirt.

His hobby it grew, as some hobbies will,  
And grew and GREW and GREW until -

Oh don't breathe a word, pretend you haven't heard.  
A simply appalling thing has occurred -

The very thought makes me iller and iller:  
Bert's brought home a gigantic gorilla!

If you think that's really not such a scare,  
What if it quarrels with his grizzly bear?

You still think you could keep your head?  
What if the lion from under the bed

And the four ostriches that deposit  
Their football eggs in his bedroom closet

And the aardvark out of his bottom drawer  
All danced out and joined in the roar?

What if the pangolins were to caper  
Out of their nests behind the wallpaper?

With the fifty sorts of bats  
That hang on his hatstand like old hats,

And out of a shoebox the excitable platypus  
Along with the ocelot or jungle-cattypus?

The wombat, the dingo, the gecko, the grampus -  
How they would shake the house with their rumpus!

Not to forget the bandicoot  
Who would certainly peer from his battered old boot.

Why it could be a dreadful day,  
And what, oh what, would the neighbours say!

**Ted Hughes**

Do not write  
in this column

9. Three of the creatures from Bert's collection have names beginning with a vowel. Write the name of each in the space below.

ostrich(es)    aardvark    ocelot    All 3

Do not write in this column

10. Based on your reading of the poem, which of the statements below best describes Bert's platypus? Tick  the best answer.

- very obedient
- long-tailed
- slow moving
- easily agitated

11. The poet is afraid that two of Bert's animals will fight. Name the two animals. Write your answers in the spaces below.

gorilla and (grizzly) bear    both

12. The poet tells us that Bert's hobby is getting out of control. He wants us to keep this fact a secret. In which verse of the poem does the poet ask that Bert's hobby be kept a secret? Tick  the correct box below.

- verse 1
- verse 2
- verse 3
- verse 4

13. Ladies is the plural form of the singular noun lady. Write the singular form of each of the following plural nouns. Take care with your spelling. Write your answer in the space provided.

- pigs    pig
- cattle    cow / bull / bullock / heifer
- geese    goose
- oxen    ox

All 4 = 2  
3 = 1

(2)

(6)



16. In a dancing competition Sean has to dance **20 times**. Each dance is scored out of 10 marks. In the box below are the marks awarded to Sean by one of the judges.

5	2	8	9	3
4	4	5	6	1
2	5	8	6	8
1	7	7	5	8

The **frequency table** below is to be used to show the marks awarded by the judge. Complete the table by writing the correct number in each of the boxes below.

Sean's score	Frequency
1 - 3	<input type="text" value="5"/>
4 - 6	<input type="text" value="8"/>
7 - 9	<input type="text" value="7"/>

All

Do not write in this column

17. The statements below are about three dimensional solid objects. Tick  each of the statements below **true** or **false**. The first one is done for you.

	True	False
A cube has 6 faces	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A cylinder has 2 flat faces and 1 curved face	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A cube has 6 <sup>corners</sup> vertices	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A triangular prism has 9 edges	<input checked="" type="checkbox"/>	<input type="checkbox"/>

All 3

18. A train travels <sup>2000m</sup> 2 kilometres. A second train travels 48 metres further. How far does the second train travel? Circle the correct answer below.

248m

50m

2.48km

50km

2048m

19. Look at the two numbers below.

0.8

0.74

HTU.t  
0.8  
080.0

x100  
← 2 spaces to the left

Multiply the **larger** of the two numbers by 100.

Write your answer in the space below.

80.0 or 80

20. Write the number  <sup>$\frac{1}{4} = 0.25$</sup>  sixty and one quarter as a decimal number.

Write your answer in the space below.

60.25

21. Complete each number statement below by writing the correct number in the box.

(a)

$\frac{2}{7}$  of 56 is

$56 \div 7 = 8 \times 2 = 16$

(b)

8 is  $\frac{2}{5}$  of

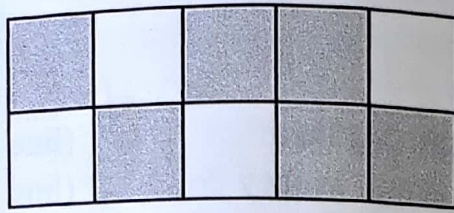
$8 \div 2 = 4 \times 5 = 20$

both

work backwards  
 $\square \div 5 = \square \times 2 = 8$   
20      4

Do not write in this column

22. The rectangle below is divided into squares of equal area.



Do not write in this column

What **percentage** of the rectangle is shaded?

$$\% = \frac{\quad}{100}$$

$$\frac{6}{10} = \frac{60}{100}$$

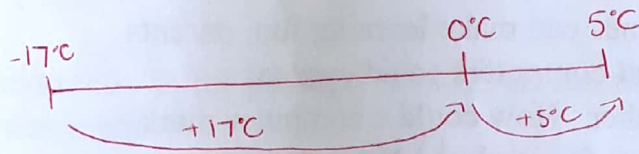
(x10)      (x10)

Write your answer in the space below.

60 %

23. In St. Petersburg the temperature is  $-17^{\circ}\text{C}$ . The temperature in Belfast is  $22^{\circ}\text{C}$  higher. What is the temperature in Belfast? Write your answer in the space below.

5  $^{\circ}\text{C}$ .



The passage you are about to read contains four errors and a missing word. Read the passage and then answer the questions that follow it.

**Children have never had it so good**

A survey of parents found that 84% think that their children learn as much from computer games as they do from their teacher. They believe theres more fun in the learning that takes place in modern classrooms.

(line 1)  
(line 2)  
(line 3)  
(line 4)

Parents are impressed by the "Brain Training" games that make the learning of multiplication tables and arithmetic so much fun. They can see the enjoyment on the faces of their children when they play these games. It's clear for all to see. These games weren't around when they were young. In those days, children had to \_\_\_\_\_ more on their teacher. Learning wasn't thought of as something that could be fun. No electronic device existed to measure "brain age" when these parents where at school.

(line 5)  
(line 6)  
(line 7)  
(line 8)  
(line 9)  
(line 10)  
(line 11)  
(line 12)  
(line 13)

While computer games can make learning fun, parents reected the idea that computers could ever take the place of the teacher. How could a computer mark homeworks or keep order in class. Nevertheless, the parents thought teachers should make learning more enjoyable in order to compete with the computer games of the future.

(line 14)  
(line 15)  
(line 16)  
(line 17)  
(line 18)  
(line 19)  
(line 20)

24. Each line of the passage is numbered. There is a spelling error in one of the lines of the passage. Tick  the number of the line containing the spelling error.

- line 1
- line 12
- line 15  *rejected*
- line 19

Do not write in this column

25. There is an apostrophe missing from one of the words in the passage. Tick  the number of the line containing the word with the missing apostrophe.

- line 3  *there's*
- line 5
- line 15
- line 17

26. A question mark is needed instead of a full stop in one of the lines of the passage. Tick  the number of the line where the question mark is needed.

- line 4
- line 8
- line 12
- line 17  *class?*

27. A word has been used incorrectly in the passage. Tick  the number of the line where the error was made.

- line 1
- line 9
- line 13  *were*
- line 18

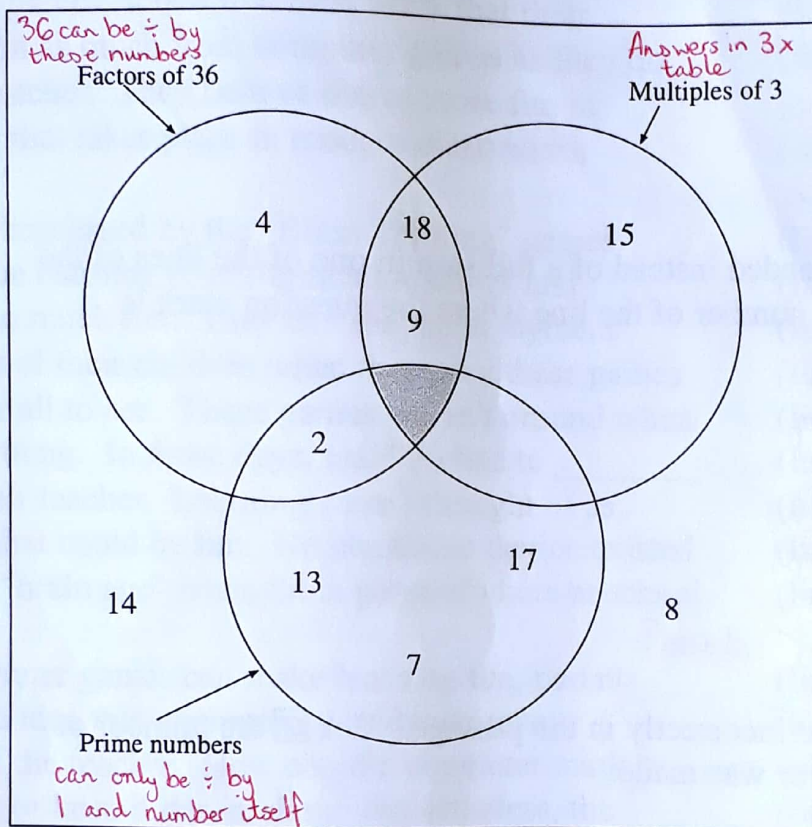
28. Look at the four words below. Choose the **best** word to fill the gap in line 10. Tick  **one** of the boxes below to show your choice.

- depended
- rely
- need
- learn

Do not write in this column

✓	
✓	
✓	
✓	

29. Eileen is drawing a Venn diagram. She is putting the **whole numbers from 1 to 20** into three sets. Each set is shown as a circle. The **factors of 36** are in one circle, the **multiples of 3** are in another circle, and the **prime numbers** are in a third circle. **Some of the numbers from 1 to 20** are shown on the Venn diagram below.



Which number should Eileen put in the shaded section of the Venn diagram?

Write your answer in the space below.

3

30. Look at the statements below. Tick  each statement **true** or **false**. The first is done for you.



$\frac{1}{8}$  of a turn =  $45^\circ$

$\frac{1}{8}$  of a complete turn is an acute angle

True



False



$\frac{3}{8}$  of a complete turn is an obtuse angle

$3 \times 45 = 135^\circ$

$91^\circ - 179^\circ$



$\frac{5}{8}$  of a complete turn is more than 3 right angles

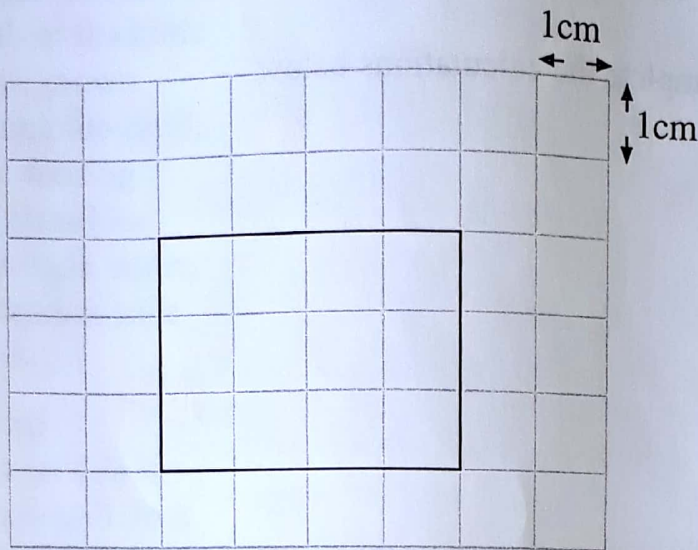
$5 \times 45 = 225^\circ$

$3 \times 90 = 270^\circ$  or  $> 270^\circ$



both

31. Look at the grid below. It is made up of small squares. The side of each small square is 1 cm long. A **rectangle** is drawn on the grid.



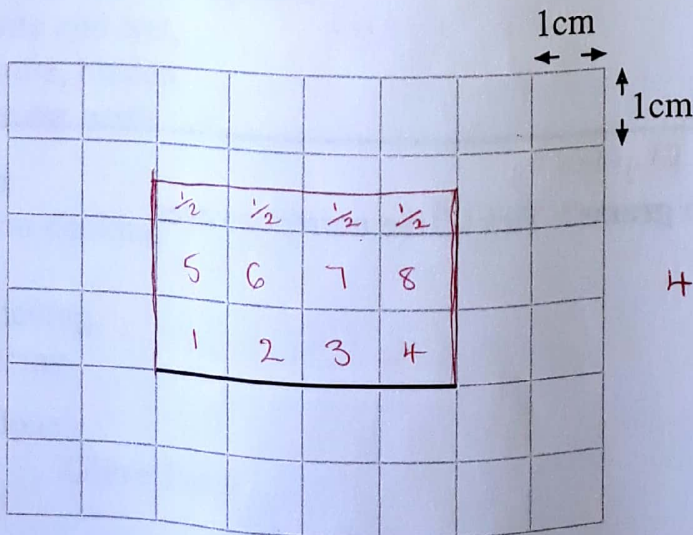
area of  $\square = l \times b$

Find the **area** of the rectangle. Write your answer in the space below.

12 cm<sup>2</sup>  $4 \times 3$

Do not write in this column

32. Look at the grid below. It is made up of small squares. The side of each small square is 1 cm long. A **line of length 4 cm** is drawn on the grid. This line is **one side** of a **rectangle of area 10 cm<sup>2</sup>**. Draw the other **three sides** of the rectangle in the grid. Draw your lines **clearly** and **accurately**.



$4 \times 2\frac{1}{2}$

Do not write in this column

33. Look at the three calculations below.

$38 \times 14 = 532$

$54 \times 12 = 648$

$148 \div 4 = 37$

Use these to help you complete the calculations below.

$76 \times 14 = \underline{1064}$

$54 \times 24 = \underline{1296}$

$19 \times 14 = \underline{266}$

$148 \div 2 = \underline{74}$

All

34. What are the values of **a** and **b** in the calculations below?  
Write your answers in the spaces provided.

$716 - a = 125$

$a = \underline{591}$

$$\begin{array}{r} 716 \\ -125 \\ \hline 591 \end{array}$$

$108 \div b = 9$

$b = \underline{12}$

$$\begin{array}{r} 12 \\ 9 \overline{)108} \\ \underline{90} \\ 18 \\ \underline{18} \\ 0 \end{array}$$

both

35. Find the missing number in the calculation below.

Write your answer in the box provided.

$\boxed{43.2} \div 6 = 7.2$

$$\begin{array}{r} 7.2 \\ \times 6 \\ \hline 43.2 \end{array}$$

1 kg = 1000g so 6kg = 6000g

36. What is 6.25 kilograms in **grams**? Tick  the correct answer.

0.625 g

6250 g

625 g

0.00625 g



37. Circle the **best word** or **best pair of words** to complete the sentence below.

In the poem the author describes how a branch leaf tree twig will change colour become shorter scream die if it is pulled out of the earth roots branch lake. All 3=2  
2=1

Do not write in this column	
(2)	✓
(2)	✓
(2)	✓
(6)	✓

38. In the **second verse** the poet talks about the tree as if it was a person. For example, the poet describes the tree's bark as **bleeding**. Find **two other words** in the **second verse** where the author talks about the tree as if it was a person. Write your answers in the spaces below.

    pain                              heal     both

39. Look at the **first verse** of the poem. For each of the phrases below find the **word** in the first verse which is **closest in meaning** to the phrase. Write the word in the space provided.

thick skin of an animal                          hide      
 the hard outer part of bread                          crust      
 disfigured and gnarled                          leprous     All 3=2  
2=1

40. **According to the poem**, to kill a tree, what must you do after you've uprooted the tree? Tick  the **best** answer.

- jab it with a knife
- expose it to the sun and air
- hack and chop its bark

41. Look at the **third verse** of the poem. Which **word** is used to show that the **earth holds the tree firmly in place**? Tick  the **best** answer.

- anchoring
- pulled
- roped
- tied

42. The words **kill**, **leprous**, **slowly** and **tree** are used in the poem. Tick  the correct box to show whether each word is a **noun**, **verb**, **adverb** or **adjective**.

	noun	verb	adverb	adjective
kill		✓		
leprous				✓
slowly			✓	
tree	✓			

All 4 = 2  
2 or 3 = 1

43. Look at the **first verse of the poem**. In this verse, the poet uses a **phrase of only three words** to suggest that the earth in which the tree grows is food for the tree. Write the phrase in the space below.

consuming the earth

Do not write in this column

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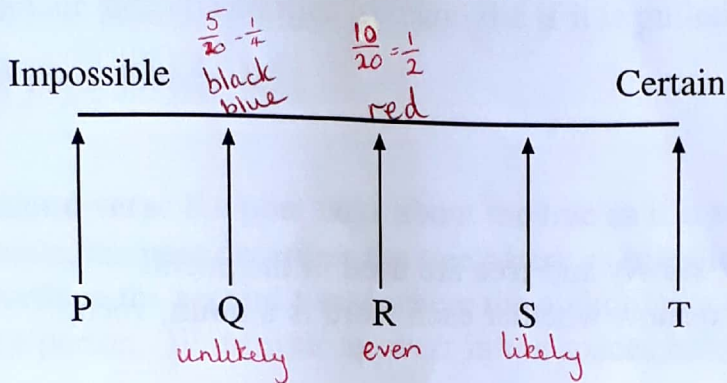
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(4)

Do not write in this column

44. A bag contains **20 balls**. There are **10 red balls**, **5 black balls** and **5 blue balls**. It is not possible to see into the bag.

Look at the probability line below. The letters P, Q, R, S and T show equally spaced positions on the probability line.



A pupil puts her hand in the bag and chooses a ball. Each statement below can be completed by **choosing a letter**. Complete each statement using a letter from the probability line. The first has been done for you.

Arrow **P** shows the probability that a **pink** ball is chosen.

Arrow R shows the probability that a **red** ball is chosen.

Arrow Q shows the probability that a **black** ball is chosen.

Arrow S shows the probability that a **black ball isn't** chosen.

All 3

45. Look at the list of five numbers below:

6                      16                      17                      48                      27

Complete each sentence below by choosing a number from the list.

(a) 17 is a **prime** number. *can only be ÷ by 17 and 1*

(b) 16 is a **square** number. *4 × 4 4<sup>2</sup> = 16*

(c) 6 is a **factor of 24**. *24 can be ÷ by 6*

All 3

46. Look at the five rules below.

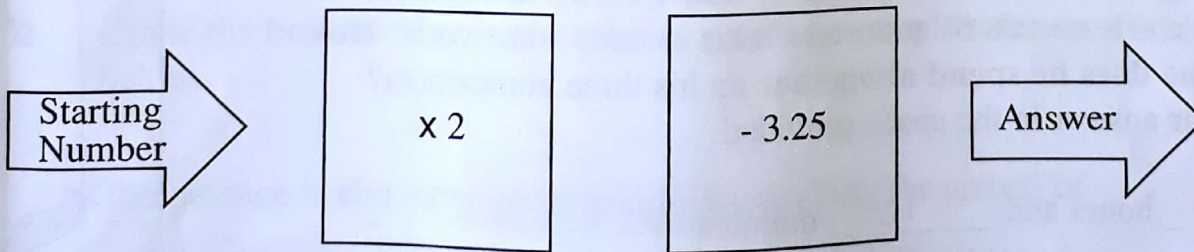
- Rule A Multiply the previous number by 5, then subtract 2
- Rule B Multiply the previous number by 4
- Rule C Add 3 to the previous number, then multiply by 2
- Rule D Add  $\frac{1}{2}$  to the previous number, then multiply by 2
- Rule E Add 2 to the previous number

Look at the number sequences below. Match the correct rule to each number sequence. The first has been done for you.

- 1, 3, 5, 7 ... Rule E
- 1, 4, 16, 64 ... Rule B  $1 \times 4 = 4$   $4 \times 4 = 16$   $16 \times 4 = 64$
- 1, 3, 7, 15 ... Rule D  $1\frac{1}{2} \times 2 = 3$   $3\frac{1}{2} \times 2 = 7$   $7\frac{1}{2} \times 2 = 15$
- 1, 3, 13, 63 ... Rule A  $1 \times 5 = 5 - 2 = 3$   $3 \times 5 = 15 - 2 = 13$   $13 \times 5 = 65 - 2 = 63$   
All 4
- 1, 8, 22, 50 ... Rule C  $1 + 3 = 4 \times 2 = 8$   $8 + 3 = 11 \times 2 = 22$   $22 + 3 = 25 \times 2 = 50$

Do not write in this column

47. Look at the function machine below.



(a) What answer does the function machine give when the starting number is 7?

Write your answer in the space below

$$7 \times 2 = 14$$

$$\begin{array}{r} 14.80 \\ - 3.25 \\ \hline 10.75 \end{array}$$

10.75

(b) What answer does the function machine give when the starting number is 3.5?

Write your answer in the space below

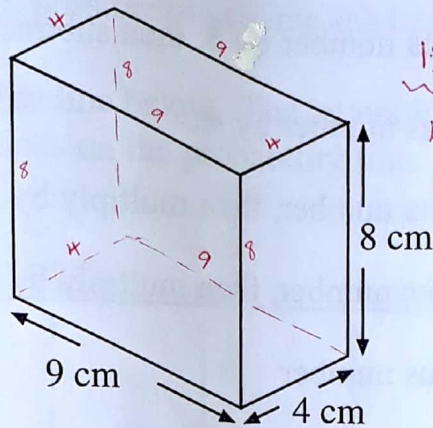
$$3.5 \times 2 = 7$$

$$\begin{array}{r} 67.80 \\ - 3.25 \\ \hline 3.75 \end{array}$$

Both

3.75

48. Look at the cuboid below. Its dimensions are 8 cm by 9 cm by 4 cm.



12 edges altogether  
 4 edges at 9cm each = 36cm  
 4 edges at 4cm each = 16cm  
 4 edges at 8cm each = 32cm  
84cm

What is the total length of all the edges of the cuboid?  
 Write your answer in the space below.

84 cm

$9 + 4 + 8 = 21 \times 4$

Do not write in this column

49. The cuboid has six faces. What is the **area of the face** with the **smallest area**? Write your answer in the space below.

32 cm<sup>2</sup>       $4 \times 8$

50. Ben has three homeworks to do for Monday. He spends **45 minutes** on his spelling homework. He spends  $1\frac{1}{2}$  <sup>90 mins</sup> **hours** on his mathematics homework. He spends **55 minutes** on his science homework. **How much time does he spend altogether** on his three homeworks? Write your answer in the space provided.

3 hours and 10 minutes

$$\begin{array}{r} 45 \\ 90 \\ .55 \\ \hline 190 \text{ mins} \end{array}$$

51. Siobhan uses her calculator to carry out the calculation:

$$156 \times 2.7 = 421.2$$

Look at the calculations below. Tick  the boxes next to the **two** calculations that give the answer 421.2.

- 15.6 x 27   
 156 x 0.27   
 1.56 x 270   
 156 x 27   
 15.6 x 0.27

Both  
no others ticked



54. The phrase **fell to our guns** is used in the **last paragraph** of the passage. **One** of the statements below gives the correct meaning of the phrase. Tick  the statement giving the correct meaning.

- were killed or wounded by the hunters' guns
- lay on the ground when they spotted the guns
- were deceived by the tricks the hunters played
- were attracted by the light glinting on the guns

55. **Four animals** are named in the passage. One is **ptarmigan**. Write the names of the other **three** in the spaces below.

deer

hare

dogs

All 3 = 2  
2 = 1

56. The phrase **went out with light hearts** is used in **paragraph two** of the passage. It means one of the following. Tick  the **best** answer.

- the hunters were happy about the arrival of spring
- the snow was causing the hearts of the hunters to beat faster
- the hunters felt ill because they couldn't find deer
- the hunters were hopeful optimistic about finding deer

57. Why couldn't the hunters abandon camp and travel to the coast? Look at the four answers below and tick  the **best** answer.

- they didn't have enough food for the journey
- their sled wasn't strong enough to travel
- the snow wasn't deep enough to travel
- their dogs were needed to search for deer

Do not write in this column

(2)

58. In the passage, what **sentence** suggests that the hunters were **north** of the deer herds? Write the sentence in the space below.

We knew then that the deer spirit had led the  
herds southward by some different path.

Do not write  
in this column

✓