

- 1 Eight friends buy one lottery ticket.  
They win £1760 and share it equally  
**How much does each friend get?**



- A. £225    B. £208    C. £220    D. £14,080    E. £13,600

*Mark the answer on the answer sheet.*

- 2 A sunflower was 0.28 metres high at the beginning of May.  
At the end of June it was 0.74 metres high.



**How many centimetres did the plant grow in May and June?**

- A 56 cm    B 460 cm    C 560 cm    D 46 cm    E 4.6 cm

*Mark the answer on the answer sheet.*

- 3 **Which one of these number sequences is correct?**

- A  $(9 \times 3) \times (4 \div 2) = 24$   
 B  $(9 \div 3) \times (4 - 2) = 24$   
 C  $(9 - 3) \times (4 + 2) = 24$   
 D  $(9 + 3) \times (4 \times 2) = 24$   
 E  $(9 \div 3) \times (4 \times 2) = 24$



*Mark the answer on the answer sheet.*

- 4 A salesperson in a mobile phone shop is paid £40 per day, plus £30 for each smartphone sold.  
 $n$  is the number of smartphones the salesperson sells on one day.

**Which expression shows how much the salesperson is paid for the day, in pounds?**

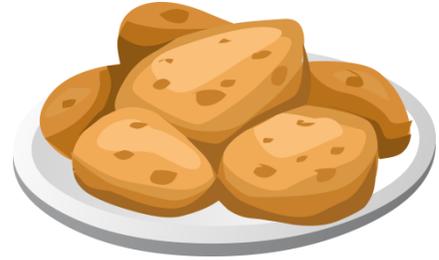
- A  $40 + 30n$   
 B  $70n$   
 C  $70 + n$   
 D  $40n + 30n$   
 E  $30 + 40n$

*Mark the answer on the answer sheet.*

- 5 Emma is having lots of people over for a family meal.  
She is going to make a big shepherd's pie.  
She needs 4 kg of potatoes and 3 kg of mince.

Price per kg

Potatoes	57p
Carrots	94p
Mince	£1.32



How much will this cost altogether?

- A £6.99    B £6.24    C £9.24    D £5.47    E £1.89

Mark the answer on the answer sheet.

- 6 Mrs Jones wins £500 in a crossword competition.  
She gives £80 to charity and shares out the rest equally between her 8 grandchildren.

How much does each grandchild receive?

- A £62.50    B £80    C £52.50    D £50.50    E £10

Mark the answer on the answer sheet.

- 7 15 pupils did a sponsored swim of 10 lengths of the local pool.  
The table shows how long it took them to do this.

Time in minutes	Less than 10	10 to less than 20	20 to less than 30	30 to less than 40	40 to less than 50
Number of pupils	0	7	2	3	3

How many pupils took 20 or more minutes to finish the swim?

- A 2    B 6    C 8    D 7    E 15

Mark the answer on the answer sheet.

8

A group of 10 tourists to London filled in a questionnaire.

They ticked the places they wanted to visit and crossed the places they did not want to visit. The table shows the results.

	London Eye	Tower of London	Trafalgar Square	St Paul's Cathedral	Madame Tussauds	Buckingham Palace
James	✓	✓	✓	x	✓	x
Anne	✓	✓	✓	x	x	x
Emma	x	x	✓	✓	✓	✓
Jim	✓	✓	x	x	✓	x
Mary	✓	✓	✓	x	✓	✓
Alice	✓	✓	x	✓	x	x
Mark	x	✓	x	x	✓	x
Peter	✓	x	✓	✓	x	✓
David	✓	✓	x	✓	✓	x
Mary	x	✓	✓	x	✓	x

How many people wanted to visit the London Eye and Trafalgar Square but not Madame Tussauds?

- A 1      B 2      C 3      D 4      E 5

Mark the answer on the answer sheet.

9

At a large cinema there are 48 seats in each row.

There are 27 rows of seats.

How many seats are there altogether?

- A 1200      B 1296      C 1392      D 1396      E 1344

Mark the answer on the answer sheet.

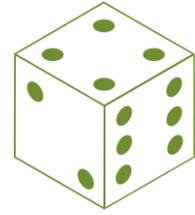


10

A dice has 6 sides. The numbers 1 to 6 appear on each side.

Phoebe throws a dice twice.

She gets a 4 on her first throw.



What is the probability of getting a 4 on the second throw?

- A  $\frac{1}{12}$     B  $\frac{1}{36}$     C  $\frac{1}{10}$     D  $\frac{1}{4}$     E  $\frac{1}{6}$

Mark the answer on the answer sheet.

11

Mrs Brown goes to buy some new tights. She is 5ft 3 in tall and her dress size is 14.

Size	Height	Dress size
Extra Small	4ft 11 in – 5ft 4 in	Under 8
Small	4ft 11in – 5ft 4 in	8 - 12
Medium	4ft 11in – 5 ft 4 in	14 - 16
Large	5ft 5 in – 5 ft 9 in	14 - 16
Extra Large	5ft 1 in – 5 ft 9 in	18 - 20

What size tights should she buy?

- A Extra Small    B Small    C Medium    D Large    E Extra Large

Mark the answer on the answer sheet.

12

Alice started from a number between 3 and 7 and counted on in steps of 3.

Josh started from the same number as Alice and counted on in steps of 7.

They both reached the number 25.

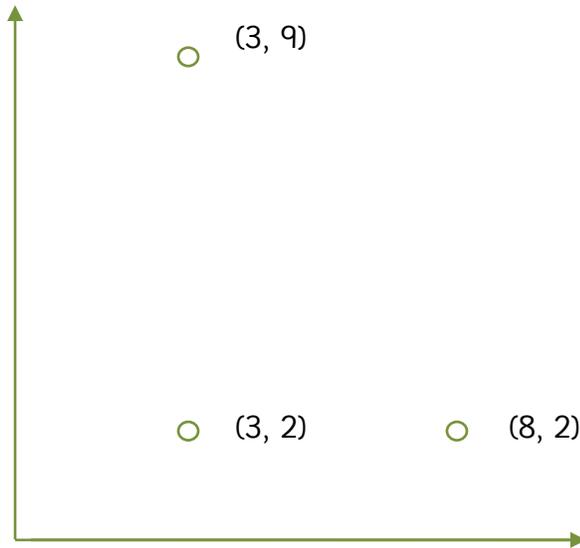
What number did they start from?

- A 3    B 4    C 5    D 6    E 7

Mark the answer on the answer sheet.

13

Matthew draws a rectangle on a centimetre square coordinate grid. Three corners of his rectangle are at points (3, 2), (3, 9), and (8,2).



What is the perimeter of Matthew's rectangle?

- A 18      B 21      C 24      D 12      E 30

Mark the answer on the answer sheet.

14

What is the value of  $x^2 + 4$  when  $x = 6$ ?

- A 10      B 12      C 24      D 40      E 100

Mark the answer on the answer sheet.

15

Add these numbers:

832.73      659.48      1001.53

Which of these is closest to the total?

- A 2493      B 2490      C 2492      D 2494      E 2495

Mark the answer on the answer sheet.

16

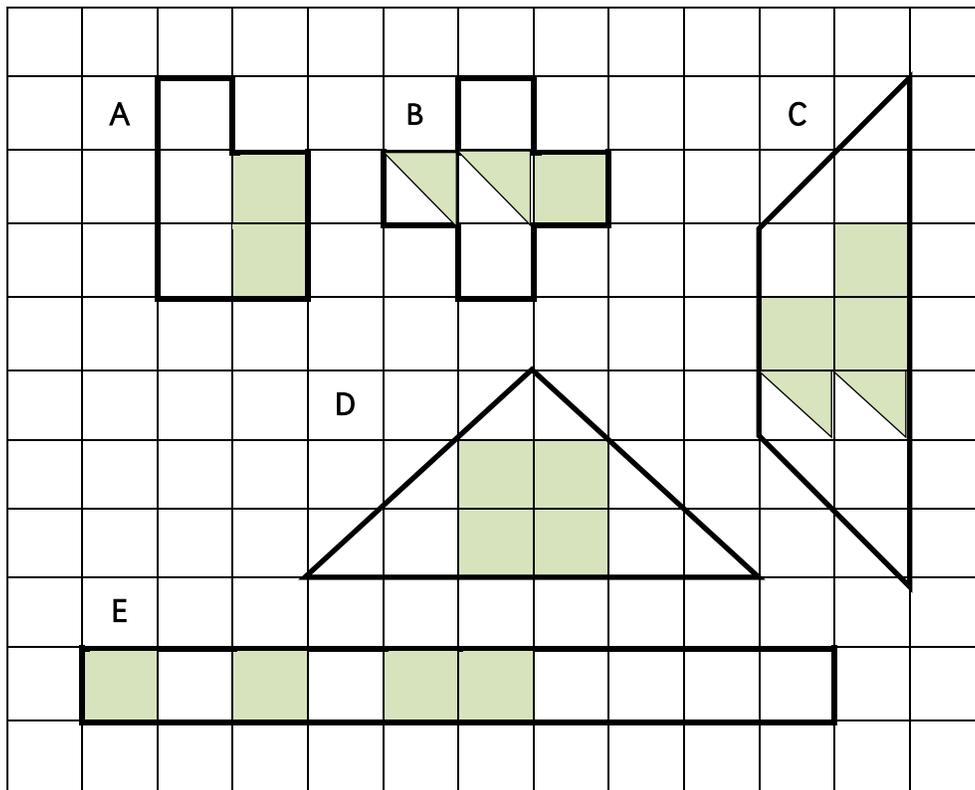
Some 2D shapes are joined together to make a 3D shape.

Which of these could be used to make a cylinder that is closed at both ends?

- A 6 squares
- B 1 circle and 1 square
- C 2 circles and 1 rectangle
- D 1 square and 4 rectangles
- E 4 squares

Mark the answer on the answer sheet.

17



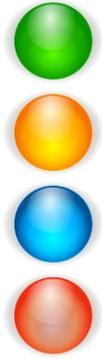
Which shape has a different fraction shaded?

- A A      B B      C C      D D      E E

Mark the answer on the answer sheet.

18

A jar had 10 blue marbles, 8 red marbles and 6 green marbles.  
 The jar tipped over and 6 of the marbles fell out.  
 After it tipped over, the probability of selecting a blue marble was  $\frac{1}{3}$ .



How many blue marbles spilled out?

- A 6      B 4      C 3      D 1      E 5

*Mark the answer on the answer sheet.*

19

Which of these shapes has exactly 8 edges?

- A triangular pyramid  
 B cuboid  
 C triangular prism  
 D square pyramid  
 E cube

*Mark the answer on the answer sheet.*

20

900 students attend Milford School.  
 30% walk to school.

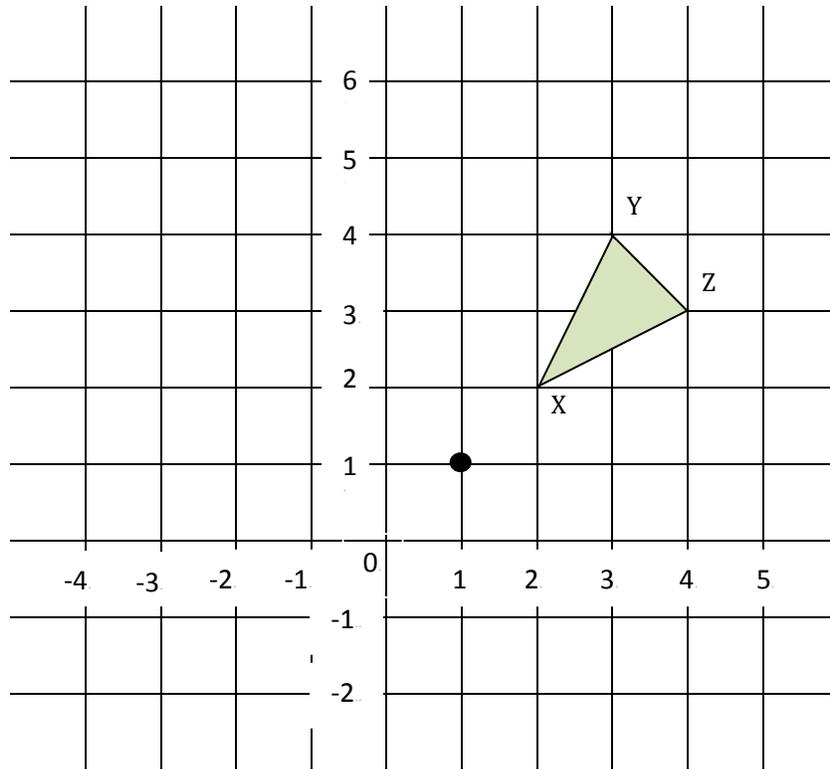
How many walk?

- A 400      B 360      C 320      D 270      E 290

*Mark the answer on the answer sheet.*



21



The triangle XYZ is rotated  $90^\circ$  clockwise about the black dot

**What will be the coordinates of X?**

- A (1, 1)      B (0, 2)      C (-1, -1)      D (0, 0)      E (2, 0)

*Mark the answer on the answer sheet.*

22

A road is 2.20 km long.

Roadworks are slowing the traffic down on half of its length.

**How far is half its length in metres?**

- A 220 m      B 2020      C 1100 m      D 440 m      E 80 m

*Mark the answer on the answer sheet.*



23

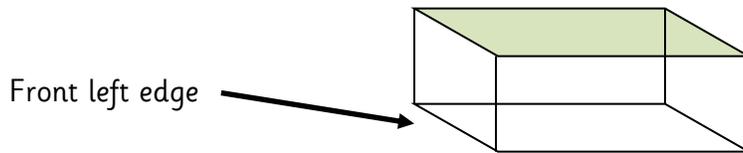
$36 \times 38 = 1368$

Which one of these is not correct?

- A  $1368 \div 38 = 4 \times 9$
- B  $4 \times 38 \times 9 = 1368$
- C  $2 \times 36 = 1368 \div 19$
- D  $4 \times 9 \times 19 = 1368 \div 3$
- E  $1368 \div 4 = 38 \times 9$

Mark the answer on the answer sheet.

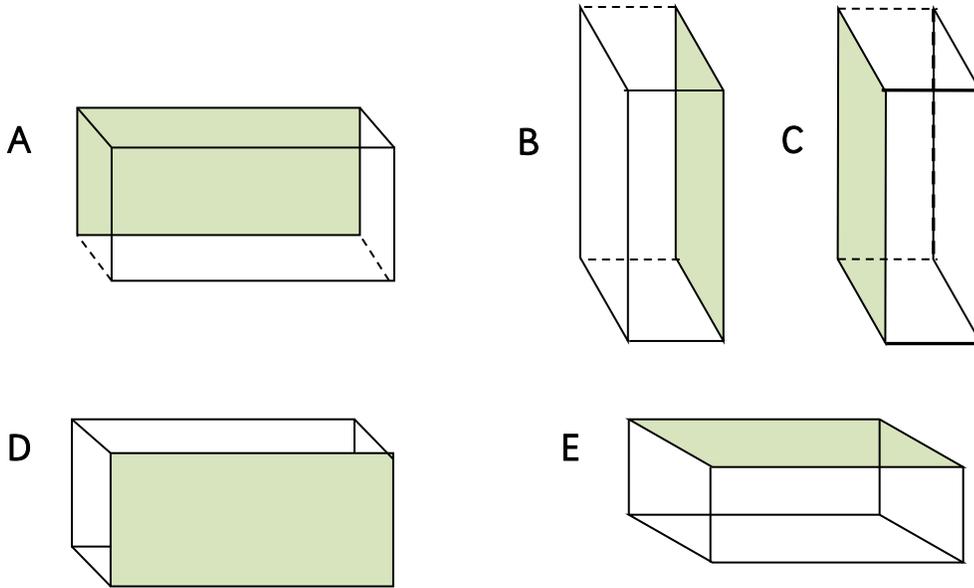
24



A cuboid is resting on a table.

It is rotated anti-clockwise about its front left edge through 1 right angle.

Which shows the correct final position?



- A A                  B B                  C C                  D D                  E E

Mark the answer on the answer sheet.

25

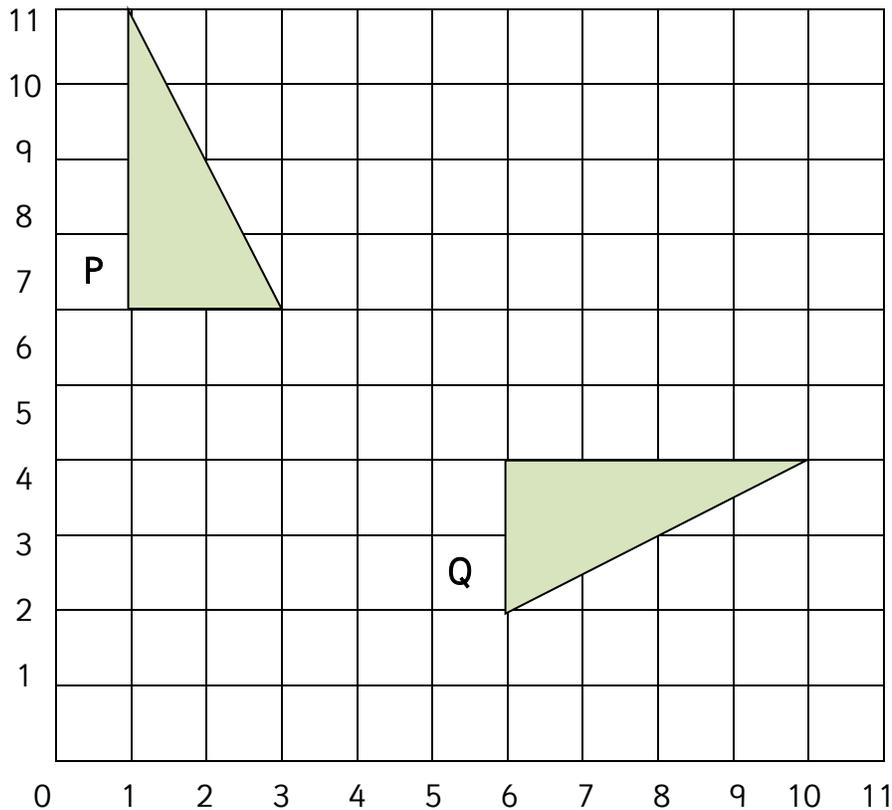
There are 15 chocolates in a box.  
3 are dark chocolate.

**What percentage are dark chocolate?**

- A 3%                  B 20%                  C 15%                  D 5%                  E 25%

*Mark the answer on the answer sheet.*

26



**Which set of instructions will transform triangle P to Q?**

- A Rotate  $90^\circ$  clockwise about (3, 5) - Move right 1 down 1  
 B Rotate  $180^\circ$  about (3, 5) - Move down 1 right 3  
 C Rotate  $90^\circ$  anti-clockwise about (3, 5) - Move right 2 down 1  
 D Rotate  $90^\circ$  clockwise about (1, 5) - Move right 4 down 1  
 E Rotate  $90^\circ$  clockwise about (1, 5) - Move down 2 right 3

*Mark the answer on the answer sheet.*

27

A bird weighs 0.18 kg.

When the bird sits on an elephant the total weight of the bird and the elephant is 4201kg.

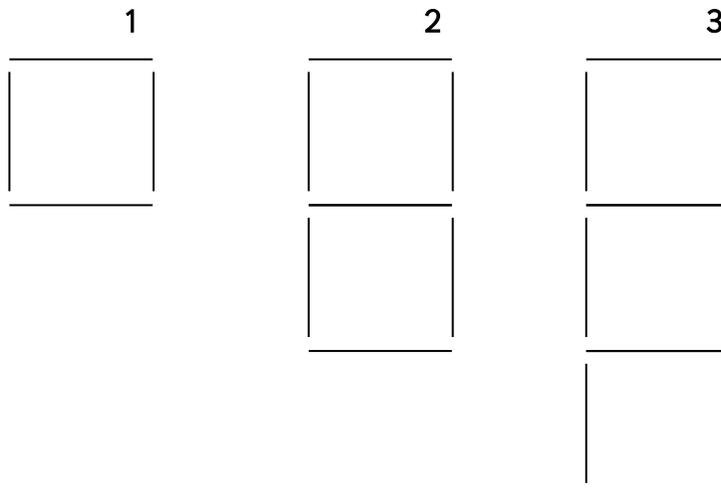
How much does the elephant weigh?

- A 4219 kg
- B 4201.18 kg
- C 4183 kg
- D 4200.82 kg
- E 4199.2 kg

Mark the answer on the answer sheet.

28

Pattern:



Matchsticks are arranged in patterns 1, 2 and 3.

What is the formula for the number of matchsticks in the  $n$ th pattern?

- A  $3n + 4$
- B  $3 + n + 1$
- C  $3n + 1$
- D  $4 + 3n$
- E  $4n$

Mark the answer on the answer sheet.

29

What is the difference in area between a square with a side length of 6 centimetres, and 6 square centimetres?

- A  $6 \text{ cm}^2$       B  $24 \text{ cm}^2$       C  $0 \text{ cm}^2$       D  $20 \text{ cm}^2$       E  $30 \text{ cm}^2$

*Mark the answer on the answer sheet.*

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30

Amy and Sue are counting back in 39s from 200.

They take turns.

Amy takes away the first 39, Sue takes away the second 39, and so on.

**What is Amy's first negative answer?**

- A -39      B -73      C -44      D -34      E -53

*Mark the answer on the answer sheet.*

Maths challenge – Answer recording sheet

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	
<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	
<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	
<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	
A		A		A	
B		B		B	
C		C		C	
D		D		D	
E		E		E	

Answers

1.	C
2.	D
3.	E
4.	A
5.	B
6.	C
7.	C
8.	B
9.	B
10.	E

11.	C
12.	B
13.	C
14.	D
15.	D
16.	C
17.	D
18.	B
19.	D
20.	D

21.	E
22.	C
23.	D
24.	C
25.	B
26.	D
27.	D
28.	C
29.	E
30.	B