

1) Fifty-four cows each produce thirteen litres of milk per day. How many litres of milk do the cows produce in a week?

- A 54 litres
- B 702 litres
- C 800 litres
- D 4914 litres
- E 648 litres

2) I write down a three-digit number using each of the numbers 7, 8 and 3 once only. What is the probability that the number I write begins with the number 3?

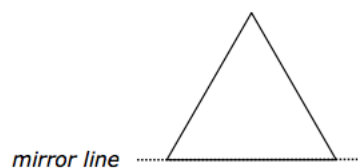
- A $\frac{1}{2}$
- B $\frac{1}{3}$
- C 1
- D $\frac{1}{6}$
- E $\frac{5}{6}$

3) How many eighths are there in 7?

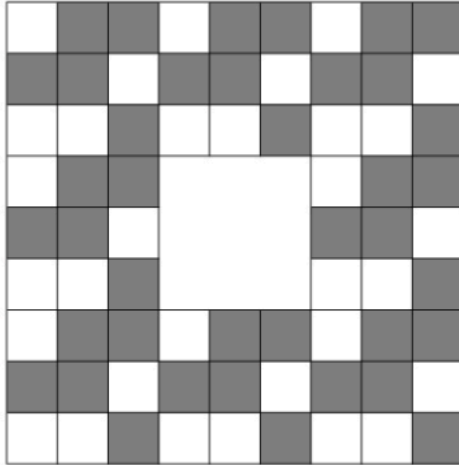
- A 8
- B 28
- C 7
- D 56
- E 42

4) If I reflect this equilateral triangle in the mirror line, what type of quadrilateral shape will I create?

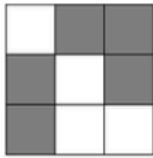
- A rhombus
- B kite
- C parallelogram
- D square
- E trapezium



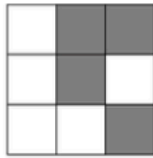
5) This pattern is made from identical grey and white tiles.



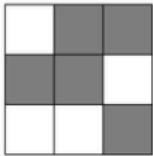
There is a gap in the centre. Which of these sets of missing tiles best completes the pattern?



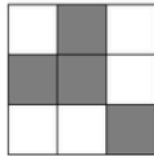
A



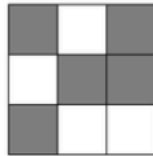
B



C



D

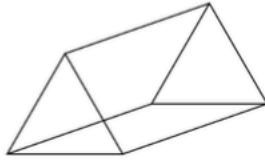


E

6) $\frac{3}{5}$ of 90 = $\frac{1}{3}$ of p
What number does p represent?

ANSWER: _____

7)



The three-dimensional figure above consists of rectangular and triangular faces. If the area of each rectangular face is t and the area of each triangular face is r , what is the total surface area of the figure in terms of t and r ?

- A $2r + 3t$
- B $r + t$
- C $2r + 2t$
- D $3r + 2t$
- E $2 + t + r$

8) If $x(v + u) = 60$ and $xu = 20$, what is the value of xv ?

- A 0
- B 60
- C 30
- D 20
- E 40

9) In a sequence, the first number is 2. Each number after the first number is obtained by tripling the previous number and then subtracting 2. What is the fourth term in the sequence?

- A 2
- B 6
- C 4
- D 28
- E 10

10) Which number below is not a factor of 112?

- A 6
- B 56
- C 2
- D 8
- E 7

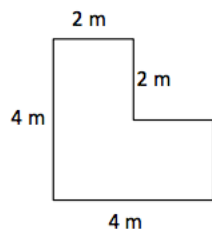
11) Which of these equals 2300?

- A 3900 - 3500
- B 2350 rounded to the nearest 100
- C 2499 rounded to the nearest 1000
- D 2150 rounded to the nearest 10
- E 2324 rounded to the nearest 50

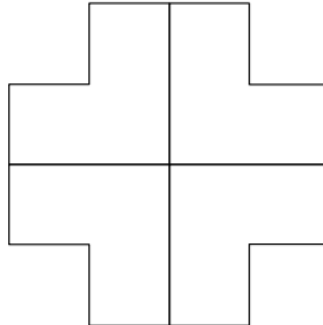
12) Betty places some sugar in a bowl on a weighing scale. The bowl weighs 74 g. The scales show the total weight to be 1.007 kg. How much does the sugar weigh?

- A One thousand and seven grams
- B 0.936 kg
- C 1.081 kg
- D Nine hundred and thirty-three grams
- E Nine hundred and ninety-six grams

13) Glynn buys 4 pieces of wood, each with the dimensions of Shape A. He fits them together to form Shape B. What is the perimeter of Shape B?



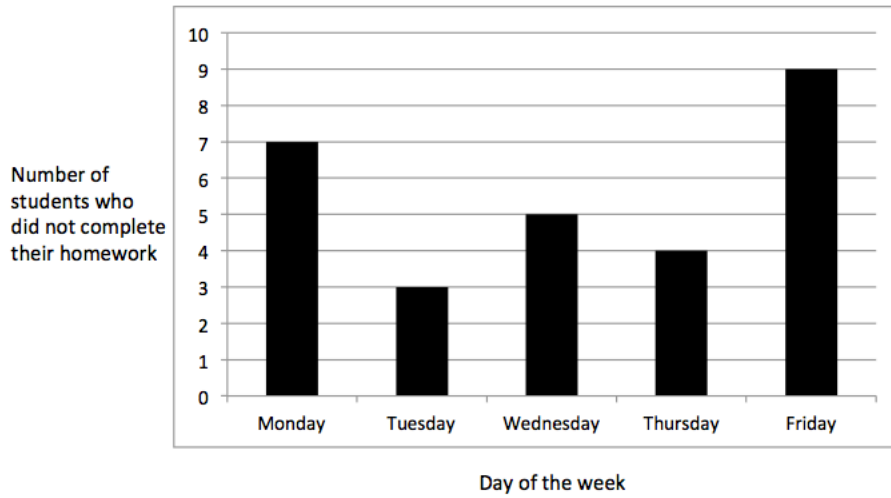
Shape A



Shape B

ANSWER: _____

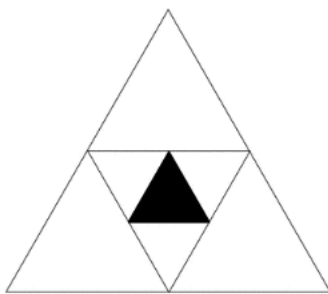
14)



The chart above represents the number of students who did not complete their homework each day in Miss. Wilson's class. There are 29 students in the class. On which day did the most children complete their homework?

- A Monday
- B Tuesday
- C Wednesday
- D Thursday
- E Friday

15) Shape D is an equilateral triangle. The shaded area is 0.3 m^2 .
What is the area of Shape D?



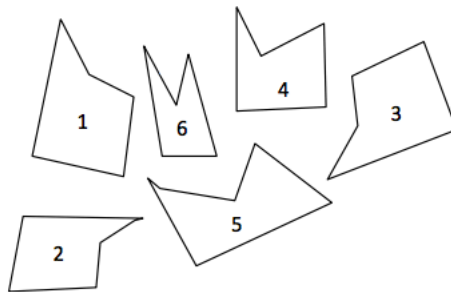
Shape D

ANSWER: _____

16) In a shop, pencils sell for 12p and pens sell for 8p.
If Fred buy some pens and some pencils and spends a total of 52p, how many pens and pencils does Fred buy?

- A 3 pens and 2 pencils
- B 3 pens and 3 pencils
- C 4 pencils and 1 pen
- D 5 pens and 2 pencils
- E 2 pens and 3 pencils

17) Which two of the shapes below are identical?



- A 6 and 5
- B 1 and 4
- C 3 and 2
- D 4 and 3
- E 1 and 3

18) Tess wants to buy a new fridge. She sees two different offers for the same fridge.
Offer 1: 20% off the original price.
Offer 2: 10% off the original price plus an extra 10% off the discounted price.
The original price of the fridge is £600.
How much more will Tess spend if she chooses Offer 2 instead of Offer 1?

- A £120
- B £6
- C £0
- D £12
- E £60

19) When a number is divided by 7, the remainder is 6.
Which of the following could be the number?

- A 0
- B 49
- C 27
- D 5
- E 43

20) Grace and Paul are running around a 400 m race track. Grace runs at 10 m/s and Paul runs at 8 m/s. How many more metres will Grace run if they both run for exactly $1\frac{2}{3}$ minutes?

ANSWER: _____

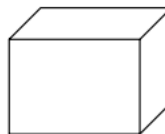
21) Tim, Tom and Travis own a total of 132 marbles. If Tim owns 28 of them and Tom owns half of the remainder, how many marbles does Travis own?

- A 104
- B 57
- C 52
- D 28
- E 56

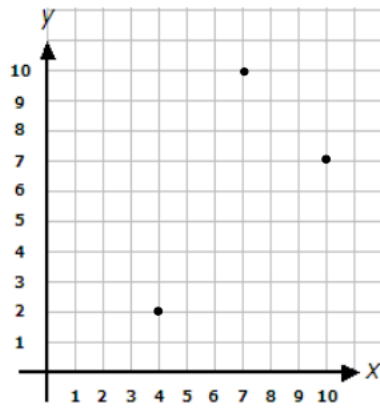
22) This cuboid has width of 7 cm, a length of 5 cm and a height of 6 cm.
The volume of the cuboid is 210 cm^3 .

If I increase the width, length and height of the cuboid by 1 cm each, what is the new volume of the cuboid?

- A 210 cm^3
- B 211 cm^3
- C 320 cm^3
- D 336 cm^3
- E 213 cm^3



- 23) The diagram below shows three corners of a rectangle. What are the coordinates of the fourth corner?



- A (5, 1)
- B (4, 5)
- C (1, 5)
- D (1, 6)
- E (2, 4)

- 24)
- | | |
|-----------|-----------|
| <i>tt</i> | <i>rs</i> |
| <i>tr</i> | <i>tt</i> |
| <i>ts</i> | <i>rt</i> |

In the pairs of letters above, if *t* is paired with itself, the pair has a value of 2. If *t* appears in a pair with another letter, the pair has a value of 1. All other pairs have a value of 0. What is the sum of the values of the six pairs?

- A 6
- B 7
- C 8
- D 9
- E 12

25) The cost, in pence, for a factory to produce n badges is given by the expression $150 + 4n$.

How much will it cost the factory to produce 17 badges?

- A £21.80
- B £218
- C 2180 p
- D £2.81
- E £2.18

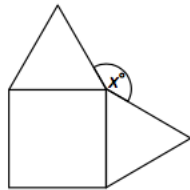
26) A machine paints 24 tins in one hour. At this rate, how many tins will it paint in 5 minutes?

- A Seven
- B Two
- C Five
- D Nine
- E Three

27) Gina drives her sportscar around a race-track 8 times. In total, she drives 2.563 km. What is the length of the race-track, to the nearest whole metre?

ANSWER: _____

28) This shape is made from two equilateral triangles and a square. What is the size of angle x ?

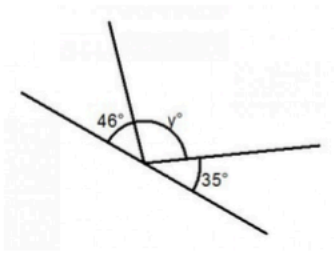


ANSWER: _____

29) A cake mixture weighs 350 g and contains 140 g of flour.
What fraction of the cake mixture is flour?

- A $\frac{2}{5}$
- B $\frac{1}{3}$
- C $\frac{3}{5}$
- D $\frac{4}{5}$
- E $\frac{1}{5}$

30) Calculate angle y .



ANSWER: _____

31) After five examinations, Rob's average score was 62%. After the sixth exam, his average score increased by 2%. What mark did Rob score in the sixth exam?

ANSWER: _____

32) In a sale, the price of a necklace is reduced by 15%. The new price of the necklace is £85. What was the original price of the necklace?

- A £70
- B £85
- C £95
- D £98
- E £100

33) Which unit is most appropriate to measure the distance from London to Paris?

- A** cm
- B** mm
- C** kg
- D** km
- E** l

34) The sum of two numbers is 264 and the difference between them is 12. What is the larger number?

ANSWER: _____

35) The students in Year 5 at Shoal School decide to sell cookies at a fair. It costs £0.63 to produce three cookies and they sell each one for £1.20. If they sell 100 cookies, how much profit do they make?

- A** £120
- B** £99
- C** £57
- D** £63
- E** £98

36) Set A consists of all even numbers that are less than 24.
Set B consists of all odd numbers that are more than 15.
How many numbers are in both Set A and Set B?

- A** 2
- B** 1
- C** 3
- D** 4
- E** 0

37) In a group of 50 boys, 32 like football and 23 like tennis.
What percentage of the boys like both football and tennis?

- A** 50%
- B** 5%
- C** 10%
- D** 8%
- E** 30%

38) I can divide my collection of stamps into groups of 7, 8 and 10 with no remainder.
What is the smallest possible number of stamps in my collection?

ANSWER: _____

39) The length of this rectangle is three times its width.
The perimeter is 96 cm.
What is the area of the rectangle?



- A** 96 cm^2
- B** 254 cm^2
- C** 432 cm^2
- D** 108 cm^2
- E** 348 cm^2

- 40) What is the size of the acute angle between the hour and minute hands on the clock below?



ANSWER: _____

- 41) It takes Kate 10 minutes to travel to school by bike at a speed of 24 km/h. When her dad drops her to school by car, the journey takes 4 minutes. At what speed does the car travel in km/h?

ANSWER: _____

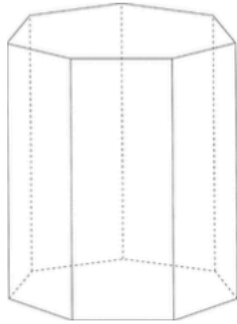
- 42) Which one of these is the smallest?

- A $\frac{7}{8}$ of 200
- B 175% of 100
- C 0.8 of 210
- D $\frac{5}{6}$ of 204
- E $0.172 \times 10 \times 10 \times 10$

- 43) The cost of 17 bananas is 45p. What is the cost of 51 bananas?

ANSWER: _____

- 44) This diagram shows a plastic container. It is made up of seven identical rectangles and a base. The area of the base is 45 cm^2 . The width of each rectangle is 4 cm and the height of each rectangle is three times the width. What is the external surface area of the container?



ANSWER: _____

- 45) Each day, John wears a shirt, a tie and a waistcoat, chosen at random from three shirts, four ties and three waistcoats. The colour of each item is listed below.

Shirt 1 Brown	Tie 1 Yellow	Waistcoat 1 Red
Shirt 2 Blue	Tie 2 Orange	Waistcoat 2 Orange
Shirt 3 Green	Tie 3 Black	Waistcoat 3 Green
	Tie 4 Green	

What is the probability that John will wear a yellow tie on Tuesday?

- A** $\frac{3}{4}$
B $\frac{1}{3}$
C $\frac{2}{3}$
D $\frac{1}{4}$
E $\frac{3}{5}$
- 46) An ant can carry thirty times its own body weight. If an ant weighs 1.25 g , how much can it carry?
- A** 375 g
B 0.375 kg
C 12.5 g
D 0.0375 kg
E 0.00375 g

- 47) Bob wishes to paint both sides of his new fence. The height of the fence is 2.5 m and the width is 3.2 m. He wishes to cover the fence with two coats of paint. Paint is sold in tins of 3 litres and costs £2.50 per tin. One litre of paint covers 2 m^2 . How much does Bob need to spend on paint to ensure that he has enough?

ANSWER: _____

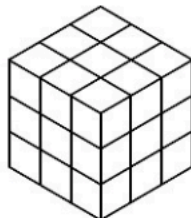
- 48) Sean buys a sticker book for £3 and some packs of stickers for £1 each. Each pack contains 7 stickers. Which expression would give the total cost in pence if Sean bought n packs of stickers?

- A $300 + 100n$
- B $3 + 7n$
- C $100 \times 7n$
- D $n + 300(7n)$
- E $300 + 10n$

- 49) A farmer has enough food to feed 30 pigs for 24 days. If he sells 10 pigs, for how many days will the food last the remaining pigs?

ANSWER: _____

- 50) Shape R is made from 27 identical cubes, each with a volume of 27 cm^3 . What is the surface area of Shape R?



Shape R

ANSWER: _____