

Key Stage 3: End of Term Test 4

Name: _____

Teacher: _____



1. (a) Write these numbers in order of size.
Start with the smallest number.

358 835 709 98 145

.....
(1)

- (b) Write these numbers in order of size.
Start with the smallest number.

4 -5 7 -1 -8

.....
(1)

- (c) Write these numbers in order of size.
Start with the smallest number.

$\frac{1}{4}$ 0.2 40% $\frac{3}{4}$ 0.5

.....
(2)

(Total for Question 3 is 4 marks)



2.

Sarah wants to buy some fruit.

She wants to buy

3 oranges at 30p each

and $\frac{1}{2}$ kg apples at £1.20 per kg.

The only money Sarah has is one 50p coin and six 20p coins.

She pays for the fruit.

Work out how much money Sarah has left.

You must show all your working.

(Total for Question 5 is 5 marks)



3.

(a) Simplify $a + a + a + a$

.....
(1)

(b) Simplify $3 \times c \times d$

.....
(1)

(c) Simplify $3ef + 5ef - ef$

.....
(1)

(d) Solve $6g = 18$

$g =$
(1)

(e) Solve $5h + 7 = 17$

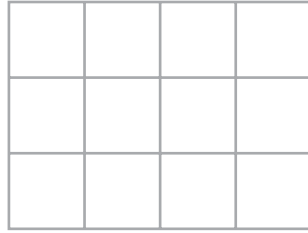
$h =$
(2)

(Total for Question 9 is 6 marks)



4.

Here is a shape.



Shade $\frac{3}{4}$ of this shape.

(Total for Question 5 is 1 mark)

5.

72 people are on a bus.
15 people get off the bus.
9 people get on the bus.

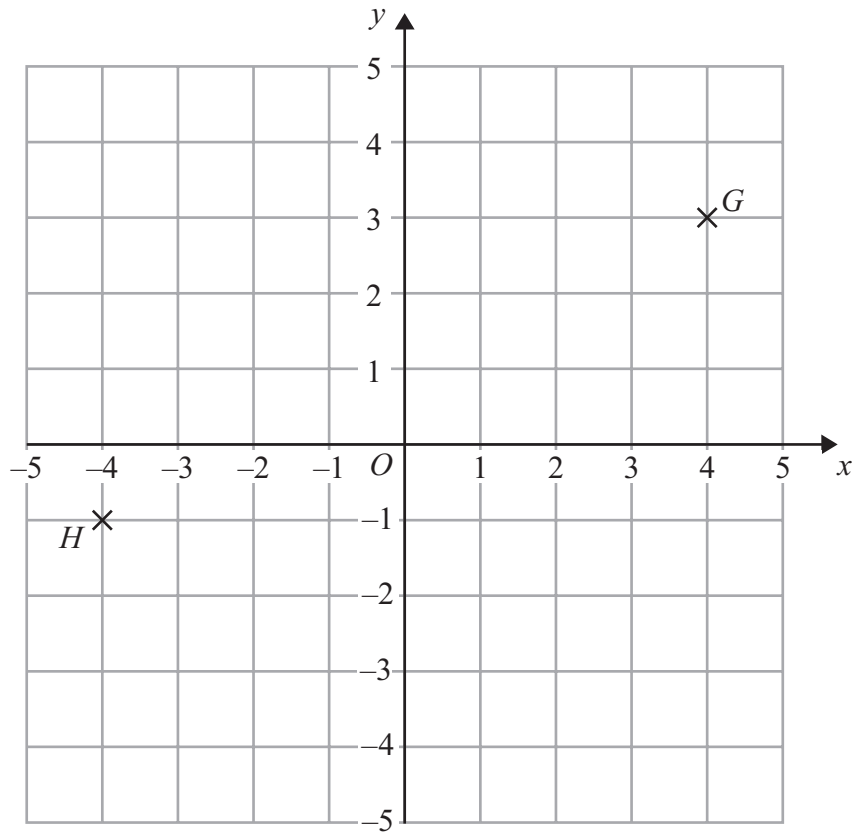
How many people are now on the bus?

.....

(Total for Question 6 is 2 marks)



6.



(a) (i) Write down the coordinates of the point G .

(..... ,)

(ii) Write down the coordinates of the point H .

(..... ,)
(2)

(b) Find the coordinates of the midpoint of GH .

(..... ,)
(2)

(Total for Question 11 is 4 marks)



7.

You can use this rule to work out the total cost of hiring a car.

$$\text{Total cost} = \text{£4 per hour plus £12}$$

Arun hires a car for 5 hours.

(a) Work out the total cost.

£
(2)

Raj hires a car.
The total cost is £40

(b) Work out how many hours Raj hires the car for.

..... hours
(3)

(Total for Question 13 is 5 marks)



8.

Here is a list of numbers.

5 15 30 50 60 90 100 125

From the numbers in the list, write down

(i) two different numbers that add up to an even number

..... ,

(ii) a multiple of 20

.....

(iii) a factor of 45

.....

(iv) a cube number

.....

(Total for Question 10 is 4 marks)



9.

The table shows the temperature every four hours one day in December.

Time	Temperature
2 am	6 °C
6 am	-4 °C
10 am	-2 °C
2 pm	8 °C
6 pm	5 °C
10 pm	-1 °C

(a) Write down the time with the lowest temperature.

.....
(1)

(b) Work out the difference between the temperature at 2 pm and the temperature at 6 pm.

..... °C
(1)

Between 10 pm and midnight the temperature goes down 5 °C.

(c) Work out the temperature at midnight.

..... °C
(2)

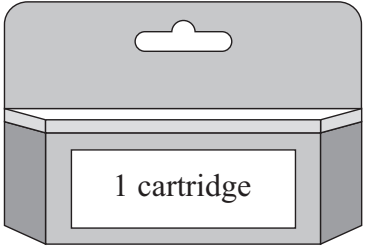
(Total for Question 13 is 4 marks)



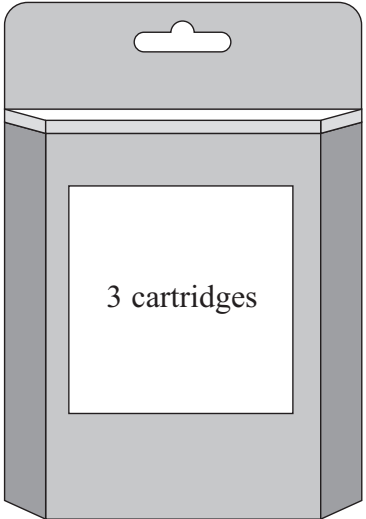
10.

George is going to buy exactly 10 ink cartridges.

Ink Cartridges



£9.39 per cartridge



£24.30 for a pack of 3 cartridges

Find the difference in cost between the cheapest way and the most expensive way to buy the 10 ink cartridges.

.....
(Total for Question 11 is 5 marks)



11.

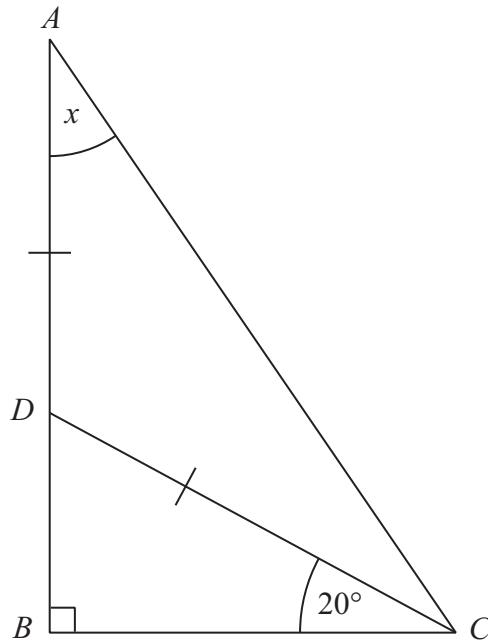


Diagram **NOT**
accurately drawn

Triangle ABC is a right-angled triangle.
 ADB is a straight line.
 $DA = DC$
Angle $BCD = 20^\circ$

Work out the size of the angle marked x .
You must give reasons for each stage of your working.

(Total for Question 18 is 4 marks)



12.

Work out 1.83×47

.....
(Total for Question 19 is 3 marks)



P 4 2 0 5 6 A 0 2 1 2 8

13.

(a) Simplify $n^5 \times n^3$

.....
(1)

(b) Simplify $n^7 \div n^2$

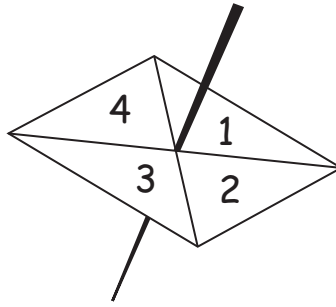
.....
(1)

(Total for Question 23 is 2 marks)



14.

Here is a four sided spinner.
The spinner is biased.



The table shows the probabilities that the spinner will land on 1 or on 3

Number	1	2	3	4
Probability	0.2		0.1	

The probability that the spinner will land on 2 is the same as the probability that the spinner will land on 4

(a) Work out the probability that the spinner will land on 4

.....
(3)

Shunya is going to spin the spinner 200 times.

(b) Work out an estimate for the number of times the spinner will land on 3

.....
(2)

(Total for Question 26 is 5 marks)



15.

(a) Expand $3(x + 4)$

.....
(1)

(b) Expand $x(x^2 + 2)$

.....
(2)

(c) Factorise $x^2 - 6x$

.....
(1)

(Total for Question 27 is 4 marks)



16.

Here is a solid prism.

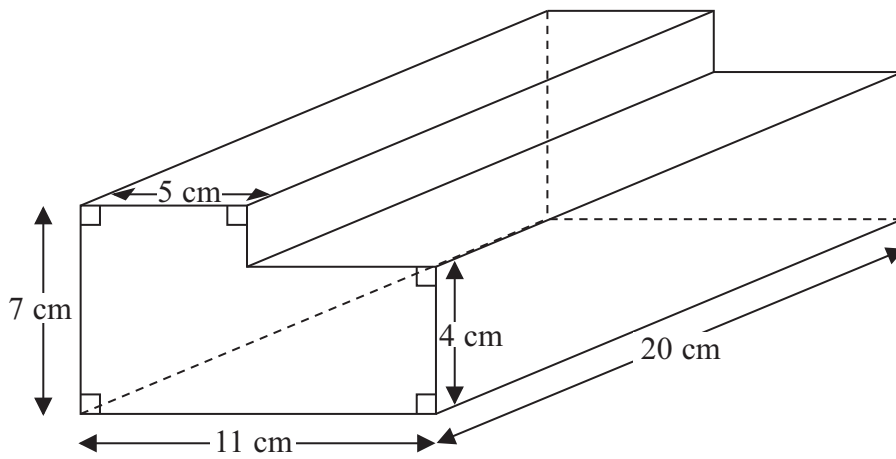


Diagram **NOT** accurately drawn

Work out the volume of the prism.

..... cm³

(Total for Question 28 is 3 marks)

