

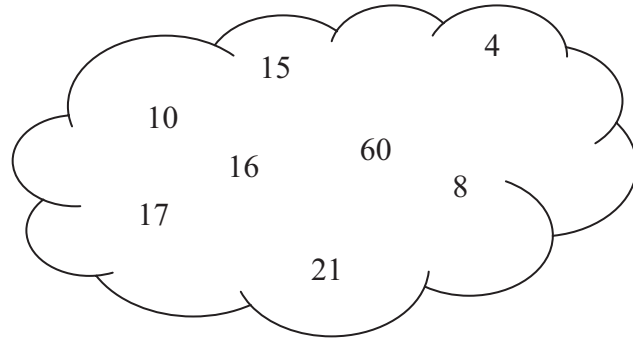
Key Stage 3: End of Term Test 2

Name: _____

Teacher: _____



1.



From the numbers in the cloud,

(a) write down a square number,

.....
(1)

(b) write down a multiple of 7,

.....
(1)

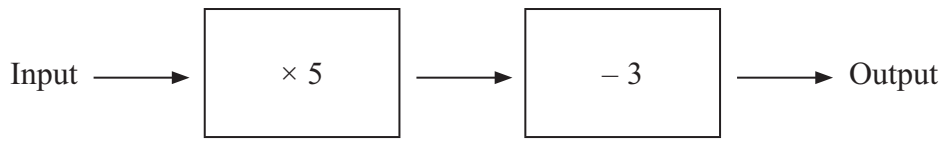
(c) write down a factor of 30

.....
(1)

(Total for Question 3 is 3 marks)



2. Here is a two-stage number machine.
It multiplies by 5 and then subtracts 3

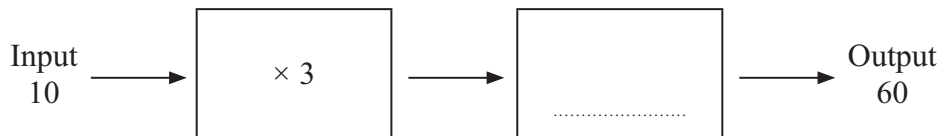


- (a) Complete the table.

Input	Output
1	2
2	7
5	22
7
.....	47

(2)

Here is a different two-stage number machine.



When the input is 10, the output is 60

- (b) Complete the number machine.

(1)

(Total for Question 4 is 3 marks)



3. The table gives information about the temperatures in Reykjavik for 5 days one week.

Day	Maximum temperature	Minimum temperature
Monday	5 °C	4 °C
Tuesday	8 °C	6 °C
Wednesday	6 °C	-2 °C
Thursday	-1 °C	-4 °C
Friday	-3 °C	-6 °C

- (a) Which day had the highest maximum temperature?

.....
(1)

- (b) What is the lowest minimum temperature?

..... °C
(1)

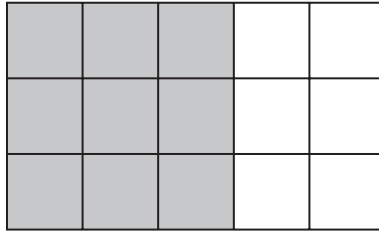
- (c) Which day had the greatest difference between the maximum temperature and the minimum temperature?

.....
(2)

(Total for Question 6 is 4 marks)



4.
(a) Write down the fraction of this shape that is shaded.
Give your fraction in its simplest form.



- (b) Write $\frac{9}{10}$ as a decimal.

.....
(2)

- (c) Tania says that 75% is greater than 0.8

Is she right?
Explain your answer.

.....
(1)

.....
(1)

(Total for Question 7 is 4 marks)



5.

Here is a list of numbers.

4 8 5 9 10 5 6 3 4

(a) Work out the median.

.....
(2)

(b) Work out the mean.

.....
(2)

(Total for Question 7 is 4 marks)



6.

Here are the ticket prices for entry to a museum.

<p style="text-align: center;">Ticket prices</p> <p style="text-align: center;">Adult ticket £12 Child ticket £7 Senior ticket £8</p> <p style="text-align: center;">Family ticket (2 adult tickets and 2 child tickets) £30</p>

Shamus takes his family to the museum.

He gets tickets for

- 2 adults,
- 3 children,
- 1 senior.

Shamus pays the least possible amount of money for the tickets.

He pays with three £20 notes.

How much change should he get?

£.....

(Total for Question 10 is 4 marks)



7.

Jim's pay is £180 each week.

Jim asks his boss for an increase of £20 a week.

Jim's boss offers him a 10% increase.

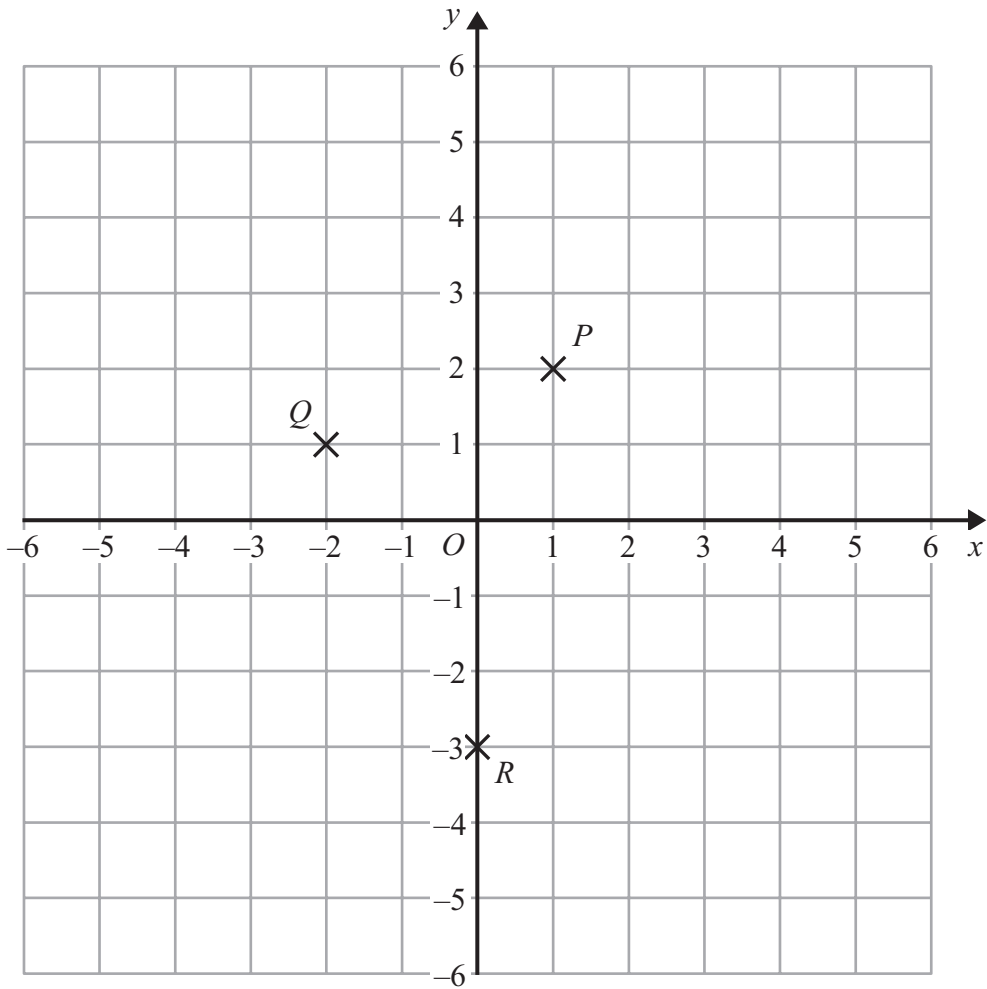
Is the offer from Jim's boss more than Jim asked for?

You must show your working.

(Total for Question 5 is 3 marks)



8.



(a) Write down the coordinates of the point P .

(.....,)
(1)

(b) Write down the coordinates of the point R .

(.....,)
(1)

P , Q and R are three vertices of a parallelogram.

(c) Write down the coordinates of the fourth vertex of this parallelogram.

(.....,)
(1)

(Total for Question 11 is 3 marks)



9.

Here are the first four terms of a number sequence.

3 7 11 15

(a) (i) Write down the next term in the sequence.

.....

(ii) Explain how you got your answer.

.....

(2)

(b) Work out the difference between the 10th term and the 15th term in the sequence.

.....

(2)

(Total for Question 12 is 4 marks)

10.

(a) Simplify $f + f + f + f - f$

.....

(1)

(b) Simplify $2m \times 3$

.....

(1)

(c) Simplify $3a + 2h + a + 3h$

.....

(2)

(Total for Question 13 is 4 marks)



11.

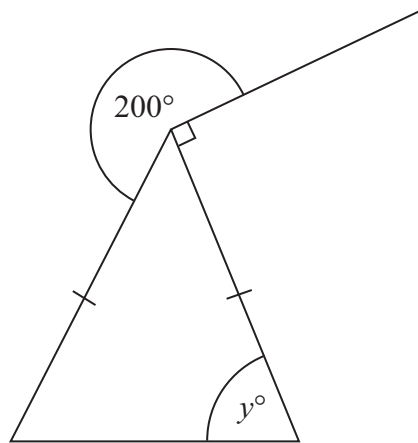


Diagram **NOT**
accurately drawn

Work out the value of y .
Give reasons for your answer.

(Total for Question 19 is 4 marks)



12.

Sapir buys 60 bags.

She pays £3 for each bag.

Sapir sells $\frac{1}{2}$ of the bags for £5 each.

She sells $\frac{1}{3}$ of the bags for £4 each.

Sapir wants to make a total profit of £75

How much should she sell each of the remaining bags for?

£.....

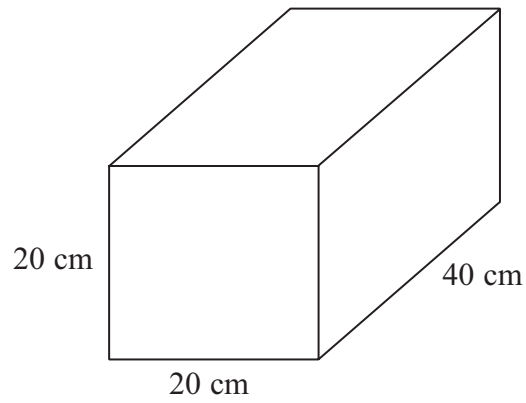
(Total for Question 20 is 4 marks)



13.

Here is a cuboid.

Diagram **NOT**
accurately drawn



Work out the volume of the cuboid.

.....
(Total for Question 9 is 3 marks)



14.

Hannah has a biased coin.
She is going to throw the coin once.
The probability of getting heads is 0.7

(a) Work out the probability of getting tails.

.....
(2)

Jamal is going to throw this coin 200 times.

(b) Work out an estimate for the number of heads Jamal will get.

.....
(2)

(Total for Question 22 is 4 marks)



15.

Ashley wants to buy some tins of paint.

He finds out the costs of paint at two shops.

Paint R Us



Normal price £2.19 a tin

Special Offer

Buy 2 tins at the normal price and get the 3rd tin free

Deco Mart



Normal price £1.80 a tin

Special Offer

10% off the normal price

Ashley needs 9 tins of paint.

Ashley wants to get all the tins of paint from the same shop.

He wants to pay the cheapest possible total price.

Which of the two shops should Ashley buy the paint from?

(Total for Question 16 is 6 marks)



16.

Talil is going to make some concrete mix.

He needs to mix cement, sand and gravel in the ratio 1 : 3 : 5 by weight.

Talil wants to make 180 kg of concrete mix.

Talil has

15 kg of cement

85 kg of sand

100 kg of gravel

Does Talil have enough cement, sand and gravel to make the concrete mix?

(Total for Question 29 is 4 marks)



P 4 0 6 7 2 A 0 2 9 3 2