**Answer ALL questions.**

73

**Year 10 Foundation End of Year Assessment**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

**1** Write down the value of the 6 in the number 1623

.......................................................

**(Total for Question 1 is 1 mark)**

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**2** Write 42.76 correct to 1 decimal place.

.......................................................

**(Total for Question 2 is 1 mark)**

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**3** Work out 68.3 × 1000

.......................................................

**(Total for Question 3 is 1 mark)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4** Write the fraction  in its simplest form.

.......................................................

**(Total for Question 4 is 1 mark)**

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**5** Write 45% as a decimal.

.......................................................

**(Total for Question 5 is 1 mark)**

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**6** The pictogram shows information about the number of dogs kept in a kennel in each of April, May and June.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **April** |  |  |  |  |
| **May** |  |  | **Key:** |  |
| **June** |  |  |  | represents 10 dogs |
| **July** |  |  |  |  |

(*a*)Write down the number of dogs kept in May.

.......................................................

**(1)**

15 dogs were kept in July.

(*b*)Show this information on the pictogram.

**(1)**

(*c*)What was the total number of dogs kept in these four months?

.......................................................

**(2)**

**(Total for Question 6 is 4 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7** Work out the difference, in minutes, between 2 hour 35 minutes and 1 hours.

....................................................... minutes

**(Total for Question 7 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8** Jordan has seven blocks of ice.

The total weight of all seven blocks of ice is 5 kilograms.

6 of the blocks of ice each have a weight of 750 grams.

Work out the weight, in grams, of the other block of ice.

....................................................... grams

**(Total for Question 8 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**9** *PQR* is a straight line.



105°

32°

Work out the size of angle *x*.

....................................................... °

**(Total for Question 9 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10**



(*a*)Plot the point with coordinates (1, 2)

 Label this point *A*.

**(1)**

(*b*)Write down the coordinates of the midpoint of *AC*.

(............................ , ............................)

**(1)**

**(Total for Question 10 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**11** Amity flips a counter 3 times.

The outcome of each flip is either Red or Black.

List all the possible outcomes of the 3 flip.

......................................................................................................................................................

......................................................................................................................................................

......................................................................................................................................................

**(Total for Question 11 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**12** Jessica is on holiday in France.

She has 250 euros to spend on clothes.

Jessica buys

1 pair of shoes costing 90 euros

3 T-shirts costing 25 euros each.

She also wants to buy a jumper costing 80 euros

(*a*)Has Jessica got enough money to buy the jumper?

 You must show how you get your answer.

**(3)**

The shoes cost 90 euros

The exchange rate is 1 euro = £0.825

Jessica says,

“The shoes cost less than £70”

Jessica is wrong.

(*b*)Using a suitable approximation, show working to explain why.

**(2)**

**(Total for Question 12 is 5 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**13** (*a*)Simplify 3*a* × 4*b*

.......................................................

**(1)**

(*b*)Simplify 4*x* – 2*y* + 6*x* + *y*

.......................................................

**(2)**

**(Total for Question 13 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**14** Work out 27 × 17

.......................................................

**(Total for Question 14 is 2 marks)**

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**15** 150 people were at a concert.

Each person had a ticket to stand or to sit to watch the concert.

85 of the people were female

39 of the males had a ticket to stand

40 of the people had a ticket to sit

(*a*)Use this information to complete the frequency tree.



150

**(3)**

One of the 150 people is chosen at random.

(*b*)Write down the probability that this person is a male who had a ticket to stand.

.......................................................

**(1)**

**(Total for Question 15 is 4 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**16** Owen drove from his home to his friend’s house.

He stayed at his friend’s house and then drove home.

Here is Owen’s travel graph.



 16 00 17 00 18 00 19 00 20 00 21 00

(*a*)For how many minutes did Owen stay at his friend’s house?

....................................................... minutes

**(1)**

(*b*)What was Owen’s average speed on his journey home?

....................................................... km/h

**(2)**

**(Total for Question 16 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17** *x* – 3 = 7

Work out the value of 3 + *x*2

.......................................................

**(Total for Question 17 is 3 marks)**

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**18** The pie charts show information about the favourite meal of each student at school **A**

and of each student at school **B**.



breakfast

breakfast

dinner

dinner

lunch

lunch

 There are 240 students at school **A**. There are 380 students at school **B**.

Kamal says,

 “The same number of students at each school have dinner as their favourite meal.”

Is Kamal correct?

You must show how you get your answer.

**(Total for Question 18 is 4 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**19** Here is a number line.



Write down the inequality shown on the number line.

..............................................................................................................

**(Total for Question 19 is 2 marks)**

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**20** Find the Lowest Common Multiple (LCM) of 120 and 144

.......................................................

**(Total for Question 20 is 3 marks)**

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**21** There are 90 people at a party.

Half of the people at the party are women.

The number of women at the party is 3 times the number of men at the party.

The rest of the people at the party are children.

 the number of children at the party : the number of men at the party = *n* : 1

Work out the value of *n*.

You must show how you get your answer.

*n* = .......................................................

**(Total for Question 21 is 4 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**22** Work out 1 × 1

Give your answer as a mixed number.

.......................................................

**(Total for Question 22 is 3 marks)**

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**23** The diagram shows triangle *ABC*.

**

53°

*ADB* is a straight line.

the size of angle *DCB* : the size of angle *ACD* = 3 : 1

Work out the size of angle *BDC*.

....................................................... °

**(Total for Question 23 is 4 marks)**

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**24** 6 red bricks have a mean weight of 7 kg.

4 blue bricks have a mean weight of 8 kg.

2 green bricks have a mean weight of 5 kg.

Elisa says,

 “The mean weight of the 12 bricks is less than 7 kg.”

Is Elisa correct?

You must show how you get your answer.

**(Total for Question 24 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**25** (*a*)Simplify (*p*3)4

.......................................................

**(1)**

(*b*)Simplify 16*x*8*y*5 ÷ 4*x*5*y*

.......................................................

**(2)**

**(Total for Question 25 is 3 marks)**

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**26** The diagram shows triangle *AOB*.



(6*x*)°

(10*x*)°

Angle *AOB* is **not** an obtuse angle.

Find the greatest value of *x*.

You must show all your working.

.......................................................

**(Total for Question 26 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**27** *ABC* and *PQR* are similar right-angled triangles.



12 cm

16 cm

12 cm

angle *ABC* = angle *PQR*

(*a*)Work out the length of *PR*.

....................................................... cm

**(2)**

Triangle *EGH* is congruent to triangle *KGF*.



*HK* = 12 cm.

*HG* = 5 cm.

(*b*)Work out the length of *EF*.

....................................................... cm

**(2)**

**(Total for Question 27 is 4 marks)**

**TOTAL FOR PAPER: 73 MARKS**