GORDONSTOUN MATHS TEST – 13+

Name:

1 $N = 18$, $M = 24$

a Find the Highest Common Factor of N and M.

.....

b Find a common factor of N and M that is a prime number.

.....

c Find the Lowest Common Multiple of N and M.

.....

(3 marks)

2 Work out

a -8×-4

.....

b $14 \div -4$

.....

(2 marks)

3 The temperatures in a garden on 5 nights were

−2°C 4°C 4°C −6°C −5°C

a Work out the mean.

..... °C

b Work out the range.

..... °C

(2 marks)

GORDONSTOUN MATHS TEST – 13+

4 Work out an estimate of $\frac{31 \times 19}{2.1}$

.....

(1 mark)

5 Work out

a $\sqrt[3]{64}$

.....

b 2^4

.....

(2 marks)

6 Simplify

a $5x + y + 2x - 4y$

.....

b $4y \times 3y$

.....

(2 marks)

7 Expand $4(x - 5)$

.....

(1 mark)

GORDONSTOUN MATHS TEST – 13+

8 Find the value of $3x^2$

a when $x = 2$

.....

b when $x = -3$

.....

(2 marks)

9 $v = u + at$

a Find the value of v when $u = 18$, $a = 6$ and $t = \frac{1}{2}$

.....

b Find the value of v when $u = -10$, $a = -5$ and $t = -2$

.....

(2 marks)

10 Work out $\frac{7}{8} + \frac{3}{4}$ giving your answer as a mixed number.

.....

(2 marks)

11 Work out $\frac{3}{8} \times \frac{16}{27}$ giving your answer in its simplest form.

.....

(2 marks)

GORDONSTOUN MATHS TEST – 13+

12 A cat eats $\frac{3}{4}$ of a tin of cat food every day.

How long will 8 tins of cat food last?

.....

(1 mark)

13 a Change $4\frac{2}{3}$ to an improper fraction.

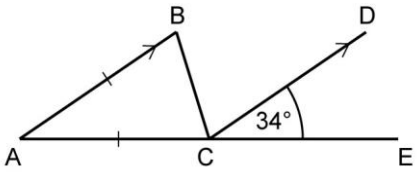
.....

b Work out $4\frac{2}{3} \div \frac{1}{3}$

.....

(2 marks)

14 ABC is an isosceles triangle. CD is parallel to AB.



Find the size of angle BCD. ..... °

(2 marks)

15 Work out the size of the interior angle of a regular 10-sided polygon.

..... °

(2 marks)

GORDONSTOUN MATHS TEST – 13+

16 Write these numbers in order. Start with the smallest number.

0.370 −0.13 0.098 0.2 0.17

.....

(1 mark)

17 Work out

a 4.2 − 4.18

.....

b 6.2 ÷ 0.5

.....

(2 marks)

18 Write $12\frac{1}{2}\%$ as a fraction. Give your answer in its simplest form.

.....

(1 mark)

29 Solve

a $4x + 1 = 2x - 3$

$x =$ .....

b $2(y - 2) = 1$

$y =$ .....

(2 marks)

20 Work out 4% of £128

£.....

(1 mark)

GORDONSTOUN MATHS TEST – 13+

21 Change 5 m^2 to cm^2.

.....cm^2

(1 mark)

22 There are 168 children in Year 7.

Seventy two of these are girls.

Work out the ratio of boys to girls. Give your answer in its simplest form.

.....

(2 marks)

23 Ally and Bo share £50 in the ratio 1 : 4

How much more money does Bo get than Ally?

.....

(2 marks)

24 A bricklayer can lay 50 bricks in an hour.

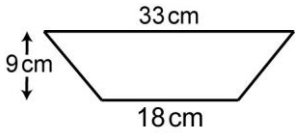
How long will it take 4 bricklayers to lay 1000 bricks?

.....hours

(1 mark)

GORDONSTOUN MATHS TEST – 13+

25 Here is a trapezium.



Work out the area of the trapezium.

.....cm^2

(1 mark)

26 A cuboid is 5 cm by 6 cm by 8 cm.

Work out its total surface area.

.....cm^2

(1 mark)

27 Here are the first four terms of an arithmetic sequence.

5 10 15 20

a Write an expression, in terms of n, for the nth term of this sequence.

.....

Akim thinks that the 21st term of the sequence ends in a 5

b Is he correct? You must give a reason for your answer.

…….....……

…….....……

(2 marks)