

Factors, Multiples and Primes

ANSWERS

No calculator | 30 minutes | Total marks: 25

Name Class

1 Here is a list of numbers.

4 9 12 15 20 27 30

(a) Write down the numbers from the list that are multiples of 5

Answer 15, 20, 30 (1) [1 mark]

(b) Write down the numbers from the list that are divisible by 3

Answer 9, 12, 15, 27, 30 (1)(1) [2 marks]

(c) Write down the numbers from the list that are divisible by 10

Answer 20, 30 (1) [1 mark]

2 (a) Write down the first five multiples of 6

Answer 6, 12, 18, 24, 30 (1) [1 mark]

(b) Write down the first five multiples of 8

Answer 8, 16, 24, 32, 40 (1) [1 mark]

(c) Write down the lowest common multiple of 6 and 8

Answer 24 (1) [1 mark]

3 (a) List all the factors of 18

Answer 1, 2, 3, 6, 9, 18 (1)(1) [2 marks]

(b) List all the factors of 30

Answer 1, 2, 3, 5, 6, 10, 15, 30 (1)(1) [2 marks]

(c) Write down the highest common factor of 18 and 30

Answer 6 (1) [1 mark]

4

Is 135 divisible by 9?

You **must** show how you decide.

$$1 + 3 + 5 = 9 \text{ (1)}$$

Yes, because 9 is divisible by 9 (1)

[2 marks]

5

Circle the **four** prime numbers.

2 9 11 15 17 21 23

2, 11, 17, 23 circled

All four and no others scores 2 marks. Two or three correct scores 1 mark.

[2 marks]

6

Explain why 51 is **not** a prime number.

51 = 3 × 17, so it has more than two factors (1)

[1 mark]

7

Work out the highest common factor of 24 and 40

24: 1, 2, 3, 4, 6, 8, 12, 24

40: 1, 2, 4, 5, 8, 10, 20, 40 (1)

Answer 8 (1)

[2 marks]

8

Work out the lowest common multiple of 4, 6 and 9

4: 4, 8, 12, 16, 20, 24, 28, 32, 36

6: 6, 12, 18, 24, 30, 36

9: 9, 18, 27, 36 (1)

Answer 36 (1)

[2 marks]

9

Bus A leaves the bus station every 6 minutes.

Bus B leaves the bus station every 10 minutes.

Both buses leave the bus station at 9:00 am.

Work out the next time that both buses leave together.

6, 12, 18, 24, 30

10, 20, 30 (1)

Answer 9:30 am (1)

[2 marks]

10

(a) Write down a prime number between 30 and 40

Answer 31 or 37 (1)

[1 mark]

(b) Write down a number that is a factor of 20 **and** a multiple of 4

Answer 4 or 20 (1)

[1 mark]

Question	Topic	RAG
1	I can use divisibility rules	
2	I can list multiples and find a lowest common multiple	
3	I can list factors and find a highest common factor	
4	I can test whether a number is divisible by 9	
5	I can recognise prime numbers	
6	I can explain why a number is not prime	
7	I can find the highest common factor of two numbers	
8	I can find the lowest common multiple of three numbers	
9	I can solve a problem using common multiples	
10	I can use factors, multiples and primes together	