

Factors and Multiples

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NAME _____

DATE _____

1 Circle the factor of 48.

 EITHER PAPER 1 MARK

5 144 18 13 8

2 (a) Write down the first five multiples of 15.

 EITHER PAPER 3 MARKS

(b) Work out the lowest common multiple (LCM) of 15 and 25.

3 Here is a list of numbers.

 EITHER PAPER 1 MARK

57, 77, 105, 112, 162

One of these numbers is a multiple of 21.

Which number?

4 Answer both parts.

 EITHER PAPER 3 MARKS

(a) Write down all the factors of 55.

(b) Amara says, "When two multiples of 7 are added, the answer is always a multiple of 14."

Give one example to show that she is wrong.

5 Here are three statements about whole numbers.

EITHER PAPER 3 MARKS

(a) A prime number can be a multiple of 3.

Give one example to show that this is correct.

(b) The product of two even numbers is always a multiple of 8.

Give one example to show that this is not correct.

(c) A square number can be a multiple of 8.

Give one example to show that this is correct.

6 Here are four numbers.

EITHER PAPER 1 MARK

8 9 19 36

Which of these numbers has exactly two factors?

Circle your answer.

7 Here are four numbers.

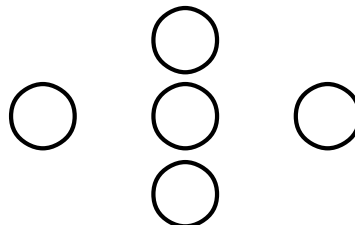
EITHER PAPER 1 MARK

3	27	36	48
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Circle the number that is a multiple of both 12 and 9.

8 Here are five circles arranged in a cross. The vertical line and the horizontal line each have three circles and share the middle one.

EITHER PAPER 2 MARKS



Put the numbers 2, 3, 4, 6, 12 into the circles so that * each line of three numbers multiplies to 144 * the total of the horizontal line is one more than the total of the vertical line. Use each number once.

9 c and d are positive whole numbers.

 EITHER PAPER 3 MARKS

c is even.

d is odd.

Tick a box for each expression to show whether it is even, odd or if you cannot tell.

(a) Is $\frac{2c+2}{2}$ even, odd or can you not tell?

(b) Is $d^2 + 1$ even, odd or can you not tell?

(c) Is $\frac{10d}{2}$ even, odd or can you not tell?

10 Find the multiple of 62 that is nearest to 524.

 EITHER PAPER 2 MARKS

1	8	2	(a) 15, 30, 45, 60, 75 (b) 75
3	105	4	(a) 1, 5, 11, 55 (b) $14 + 35 = 49$, which is not a multiple of 14 (any two multiples of 7 with one odd and one even multiplier will do)
5	(a) Any valid example, for instance: 3 is a prime number and $3 = 3 \times 1$, so it is a multiple of 3. (b) Any valid example, for instance: $2 \times 6 = 12$ and $12 \div 8 = 1.5$, so 12 is not a multiple of 8; 2 and 6 are both even. (c) Any valid example, for instance: $16 = 4^2$ and $16 = 8 \times 2$, so 16 is a square number and a multiple of 8.	6	19
7	36	8	middle circle 12; vertical line 3, 12, 4 (top and bottom in either order); horizontal line 2, 12, 6 (left and right in either order)
9	(a) odd (b) even (c) odd	10	496