**2020 Multiples, factors and primes numbers revision**

**Q1.**

Write **all** the common multiples of 3 and 8 that are **less than 50**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 mark

**Q2.**

Complete this sentence.

Every number with a factor of **10** must also have factors of



1 mark

**Q3.**

Here are five number cards.



Use each card **once** to make every statement below correct.



2 marks

**Q4.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | 23 | × | 36 | = | 23 | × | 9 | × |   |

1 mark

**Q5.**

Circle **one number** on the grid which can be **divided by 9** with a **remainder of 1**



1 mark

**Q6.**

Here is a Venn diagram for sorting numbers.

Write each number in its correct place on the diagram.

10       11       12       13



2 marks

**Q7.**

Here is a diagram for sorting numbers.

Write **one number** in each white section of the diagram.

|  |  |  |  |
| --- | --- | --- | --- |
|   |   | lessthan 1000 | 1000or more |
|   | multiplesof 20 |   |   |
|   | not multiplesof 20 |   |   |

2 marks

**Q8.**

Write all the factors of 30 which are **also** factors of 20

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 marks

**Q9.**

Here is a number chart.

Circle the **smallest** number on the chart that is a multiple of **both** 2 and 7

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
|   | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
|   | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

1 mark

Here is the same number chart.

Circle the **largest** number that is **not** a multiple of 2 or 3 or 5

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
|   | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
|   | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

1 mark

**Q10.**

Amir says,

***‘All numbers that end in a 4 are multiples of 4’.***

******

Is he correct?
Circle **Yes** or **No**.                                                                          Yes / No

Explain how you know.



1 mark

**M1.**

24 **AND** 48 only

*Numbers may be given in either order.*

**[1]**

**M2.**          1, 2 and 5

*Numbers may be given in any order.*

**[1]**

**M3.**Award **TWO** marks for the correct answer as shown:



If the answer is incorrect, award **ONE** mark for 4 true statements
with no number repeated (within those 4), eg:



***Do not*** *accept numbers other than those given.*

*(Multiple of 3 can be 48* ***OR*** *51)*

*(Multiple of 4 can be 48* ***OR*** *52)*

**Up to 2**

**U1**

**[2]**

**M4.**4

**[1]**

**M5.**          109 **OR** 118 circled.

*Accept both 109 and 118 circled.*

**[1]**

**M6.**          Award **TWO** marks for all four numbers correctly placed as shown:



If the answer is incorrect, award **ONE** mark for three numbers correctly placed.

*Accept alternative unambiguous indications, eg lines drawn from the numbers to the appropriate regions of the diagram.*

***Do not*** *accept numbers written in more than one region*

**Up to 2**

**[2]**

**M7.**          Award **TWO** marks for one correct number written in each white
section of the table, eg

|  |  |  |
| --- | --- | --- |
|   | lessthan 1000 | 1000or more |
| multiplesof 20 | 100 | 2000 |
| not multiples of 20 | 19 | 1001 |

          If the answer is incorrect, award **ONE** mark for three sections completed correctly.

*Accept more than one number in each section as long as* ***all*** *are correct.*

**Up to 2**

**[2]**

**M8.**          Award **TWO** marks for all four factors, as shown:

          1, 2, 5, 10

          If the answer is incorrect, award **ONE** mark for:

•    three factors correct and none incorrect

          **OR**

•    four factors correct and one incorrect.

*Accept factors written in any order.*

*All four factors and no incorrect numbers must be given for the award of* ***TWO*** *marks.*

**Up to 2**

**[2]**

**M9.**          (a)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 |  | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

**1**

(b)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 |  | 98 | 99 | 100 |

***Do not*** *award the mark if more than one number is circled.*

*Accept alternative unambiguous indications, eg numbers ticked, crossed or underlined.*

**1**

**[2]**

**M10.**          An explanation which gives a counter-example to illustrate that not all numbers
ending in 4 are multiples of 4, eg:

•    ‘14 is not a multiple of 4’

•    ‘4, 24 and 44 are multiples of 4, but not 14 and 34’

•    ‘14 or 34 don’t work’

•    ‘54’

          **OR**

          an explanation which recognises that only numbers ending in 4 which have
an even number of tens are multiples of 4, eg:

•    ‘It has to have an even number of 10s as well, like 20 or 40’

•    ‘14, 24, 34, 44, 54, 64 – only half of them are’

•    ‘4 doesn’t go into 10 so 14 isn’t’.

*No mark is awarded for circling ‘No’ alone.*

***Do not*** *accept vague or incomplete explanations, eg:*

*•    ‘Some numbers end in a 4 but aren’t multiples of 4’*

*•    ‘16 doesn’t end in 4’*

*•    ‘Not all multiples of 4 end in 4’*

*•    ‘24 is a multiple of 4 but the next one isn’t’*

*•    ‘4, 8, 12, 16, 20, 24 etc’.*

*If ‘Yes’ is circled but a correct, unambiguous explanation is given, then award the mark.*

**U1**

**[1]**