

Non-Calculator

Q1.

Write 36 as a product of prime factors.

Give your answer in index form.

Answer _____

(Total 3 marks)

Q2.

Diaries are sold in boxes of 12

Pencils are sold in boxes of 10

Rulers are sold in boxes of 6

A teacher wants to buy the same number of diaries, pencils and rulers.

Work out the **smallest** number of boxes of each item he could buy.

_____ boxes of diaries

_____ boxes of pencils

_____ boxes of rulers

(Total 3 marks)

Q3.

Circle the number that is **not** a multiple of 6

24

76

108

144

(Total 1 mark)

Q4.

Write 56 as a product of prime factors.

Answer _____

(Total 2 marks)

Q5.

Circle **all** the numbers that have 11 as a factor.

121

122

132

133

(Total 1 mark)

Q6.

Which one of these numbers is a multiple of 12?
Circle your answer.

72

74

76

78

(Total 1 mark)

Calculator

Q7.

Beth uses these four cards to make 4-digit numbers.

2

4

5

8

How many **different** 4-digit numbers can she make that are greater than 8000?

Answer _____

(Total 2 marks)

Q8.

Write 140 as a product of prime numbers in index form.

Answer _____

(Total 3 marks)

Q9.

Write 225 as the product of its prime factors.

Answer _____

(Total 2 marks)

Q10.

Which of these numbers is **one more** than a multiple of 5?

Circle your answer.

15 19 26 30

(Total 1 mark)

Q11.

Which of these numbers has **exactly three** factors?

Circle your answer.

3 4 5 6

(Total 1 mark)

Q12.

Circle the multiple of both 8 and 12

4

32

72

108

(Total 1 mark)**Q13.**

Written as the product of its prime factors

$$672 = 2^5 \times 3 \times 7$$

- (a) Write 252 as the product of its prime factors.

Answer _____

(2)

- (b) Work out the value of the highest common factor of 672 and 252

Answer _____

(1)**(Total 3 marks)****Q14.**

What is the largest two-digit prime number?
Circle your answer.

93

95

97

99

(Total 1 mark)

Q15.

Write down all the factors of 18

Answer _____

(Total 2 marks)

Q16.

Write 280 as a product of its prime factors.

Answer _____

(Total 2 marks)