

# GCSE Maths: Prime numbers (Foundation): worksheet

GCSE Maths - Factors, Multiples and Primes - Foundation - Lesson 2.2

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_

11 questions. Write your answers in the spaces. Answers and step-by-step help are free at [websink.site/gcse/maths/ch02-factors-multiples-primes-powers/foundation/prime-numbers/](https://websink.site/gcse/maths/ch02-factors-multiples-primes-powers/foundation/prime-numbers/)

## Exercise 2B Prime numbers

Non-calculator

### 1 Write down the prime numbers in each list.

(a) 2, 9, 11, 15, 17

Answer: \_\_\_\_\_

(b) 1, 4, 13, 21, 23

Answer: \_\_\_\_\_

(c) 27, 29, 31, 33

Answer: \_\_\_\_\_

(d) 35, 37, 39, 41

Answer: \_\_\_\_\_

(e) 43, 45, 47, 49

Answer: \_\_\_\_\_

(f) 51, 53, 55, 57

Answer: \_\_\_\_\_

### 2 List the prime numbers between 10 and 30.

Answer: \_\_\_\_\_

### 3 Is each number prime? If not, write it as a product of two smaller numbers.

(a) 51

Answer: \_\_\_\_\_

(b) 57

Answer: \_\_\_\_\_

(c) 61

Answer: \_\_\_\_\_

(d) 77

Answer: \_\_\_\_\_

(e) 87

Answer: \_\_\_\_\_

(f) 89

Answer: \_\_\_\_\_

### 4 Is each number prime? Use the test with primes up to the square root.

(a) 101

Answer:

(b) 119

Answer:

(c) 133

Answer:

(d) 143

Answer:

(e) 149

Answer:

(f) 157

Answer:

**5** Find the prime number that is:

(a) the only even prime number

Answer:

(b) between 90 and 100

Answer:

(c) one more than  $4^2$

Answer:

(d) the smallest prime number greater than 50

Answer:

(e) the largest prime number less than 30

Answer:

(f) a factor of 35 that is bigger than 5

Answer:

**6** Raffle tickets are numbered 1 to 30. A prime-numbered ticket wins a prize. How many tickets win?

Answer:

**7** Two different prime numbers multiply to give the number shown. Find the two primes and add them.

(a) 77

Answer:

(b) 143

Answer:

**8** Explain why 2 is the only even prime number.

Answer:

**9** Zoe says: "All odd numbers are prime." Give an example to show she is wrong.

Answer:

**10** Sam says: "1 is a prime number, because its only factors are 1 and itself." Explain his mistake.

Answer:

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- 11** Two prime numbers  $p$  and  $q$  have  $p + q = 24$  and  $p \times q = 143$ . Find  $p$  and  $q$ .

Answer:

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