

Prime Numbers

ANSWERS 

1 **10**

Factor pairs

$1 \times 10 = 10$

$2 \times 5 = 10$

$\square \times \square = 10$

Factors 1, 2, 5, 10

How many factors? 4

Prime? Yes No

2 **7**

Factor pairs

$1 \times 7 = 7$

$\square \times \square = 7$

$\square \times \square = 7$

Factors 1, 7

How many factors? 2

Prime? Yes No

3 **9**

Factor pairs

$1 \times 9 = 9$

$3 \times 3 = 9$

$\square \times \square = 9$

Factors 1, 3, 9

How many factors? 3

Prime? Yes No

4 **11**

Factor pairs

$1 \times 11 = 11$

$\square \times \square = 11$

$\square \times \square = 11$

Factors 1, 11

How many factors? 2

Prime? Yes No

5 **15**

Factor pairs

$1 \times 15 = 15$

$3 \times 5 = 15$

$\square \times \square = 15$

Factors 1, 3, 5, 15

How many factors? 4

Prime? Yes No

6 **13**

Factor pairs

$1 \times 13 = 13$

$\square \times \square = 13$

$\square \times \square = 13$

Factors 1, 13

How many factors? 2

Prime? Yes No

7

Write down all the prime numbers between 10 and 20.

each has exactly two factors

Answer 11, 13, 17, 19

8

Is 21 a prime number? Show how you know.

$3 \times 7 = 21$

Answer No

Prime Numbers *further practice*

ANSWERS 

9 

List all the factors of 27. Is 27 a prime number?

Factors 1, 3, 9, 27

Prime? No

10 

Write down all the prime numbers between 30 and 40.

each has exactly two factors

Answer 31 and 37

11 

Which has more factors, 16 or 17? Show how you know.

16: 1, 2, 4, 8, 16 17: 1, 17

Answer 16

12 

Ravi makes rectangles using all of his square tiles. With 12 tiles he can make 3 different rectangles: 1 by 12, 2 by 6 and 3 by 4. How many different rectangles can he make with 13 tiles? Why?

13 is prime: only 1×13

Answer 1 rectangle

13 

Ali is 50 years old. How many years will it be until his age is next a prime number?

$51 = 3 \times 17$, 52 is even, 53 is prime

Answer 3 years

14 

Raj's house number is a prime number between 20 and 30. Its digits add up to 11. What is Raj's house number?

23 and 29 are prime, $2 + 9 = 11$

Answer 29

15 

Find a number less than 20 that has exactly three factors.

4: 1, 2, 4 9: 1, 3, 9

Answer 4 or 9

16 

Mo says 1 is a prime number because it can only be divided by 1 and itself. Is Mo right? Explain.

1 has only one factor

Answer No, 1 is not prime