Prime Numbers

Practice worksheet · KS3

Name: _____ Date: _____

1. Is 2 a prime number?

2. Is 9 a prime number?

3. Is 11 a prime number?

4. Is 15 a prime number?

5. Is 1 a prime number?

6. Which one of these is prime: 21, 23, 25 ?

7. Is 29 a prime number?

8. Write down all the prime numbers between 10 and 20.

9. Is every prime number odd?

10. Is 51 a prime number?

11. Is 91 a prime number?

12. Which numbers between 20 and 30 are prime?

13. To check whether 53 is prime, what is the largest number you need to test?

★ stretch

14. To check whether 143 is prime, what is the largest number you need to test?

★ stretch

15. Is 143 a prime number?

★ stretch

Answers

Prime numbers

1. nothing divides into it except 1 and 2 = yes

2. 3 x 3 = 9, so it has more than two factors = no

3. nothing divides into it except 1 and 11 = yes

4. 3 x 5 = 15, so it has more than two factors = no

5. 1 has only ONE factor (itself), and a prime needs two = no

6. 21 = 3 x 7 and 25 = 5 x 5, but nothing divides 23 except 1 and 23 = 23

7. nothing divides into it except 1 and 29 = yes

8. test each one: 12, 14, 15, 16, 18 and 20 all have a factor = 11, 13, 17, 19

9. 2 is prime and even — it is the only even prime = no

10. 3 x 17 = 51, so it has more than two factors = no

11. 7 x 13 = 91, so it has more than two factors = no

12. cross out the multiples of 2, 3 and 5; 23 and 29 are what is left = 23, 29

13. 8 x 8 = 64, which is already past 53 = 7

14. 12 x 12 = 144, which is already past 143 = 11

15. 11 x 13 = 143, so it has more than two factors = no