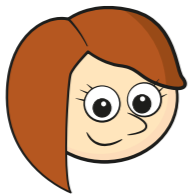


Recognise and identify prime numbers

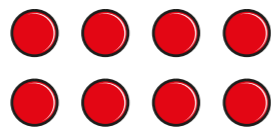
1 a) Complete the sentence.
Prime numbers are positive integers that have exactly two factors.

b)  7 is a prime number.

Explain why Rosie is correct.

1 and 7 are the only factors of 7 so it has exactly two factors and is therefore prime.

c) Aisha makes an array with 8 counters.



Explain why this shows that 8 is not a prime number.

8 has 4 factors: 1, 2, 4 and 8

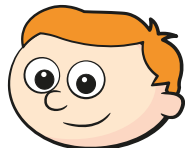
2 Circle the prime numbers.

1 3 5 9 10 11
12 14 15 17 19 21

3 Here is part of a hundred square.

31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

a) Shade all the multiples of 2
Shade all the multiples of 3
Shade all the multiples of 5
Shade all the multiples of 7

b)  51 is a prime number.

Explain how you know Ron has made a mistake.

It is a multiple of 3

c) Give a prime number between 50 and 60 e.g. 59

4 Scott rolls a fair dice numbered 1 to 6

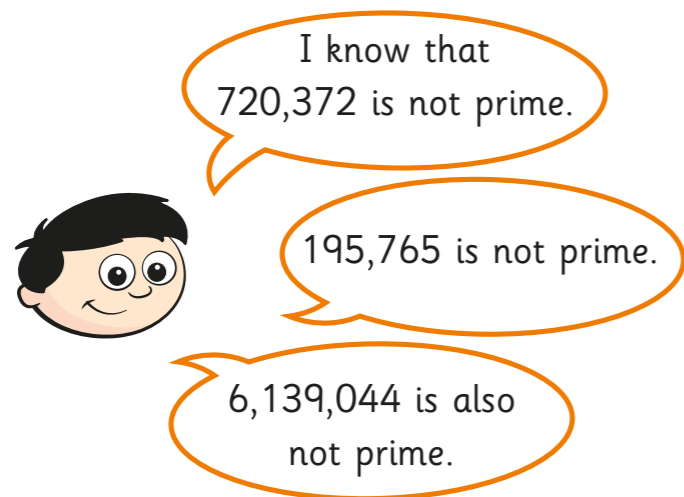


What is the probability that it lands on a prime number?

$\frac{1}{2}$



5 Dexter is working out whether some large numbers are prime numbers.



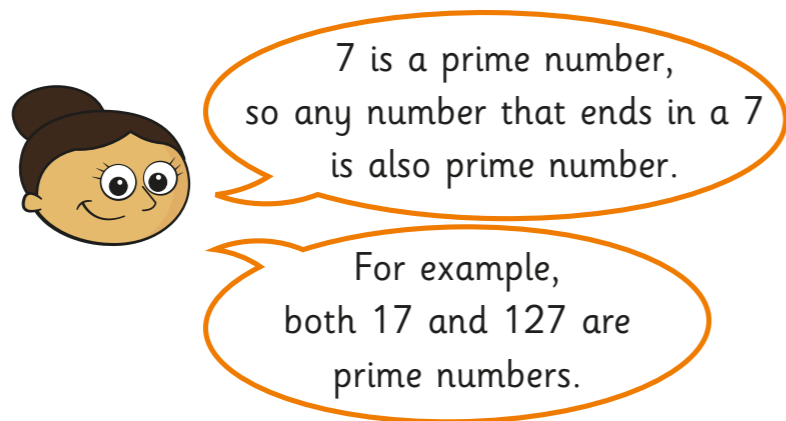
For each number, explain why Dexter is correct.

720,372 is not prime because it is even.

195,765 is not prime because it ends in 5

6,139,044 is not prime because it is even.

6



Do you agree with Dora? No

Explain your answer.

7 a) Amir thinks of two prime numbers.

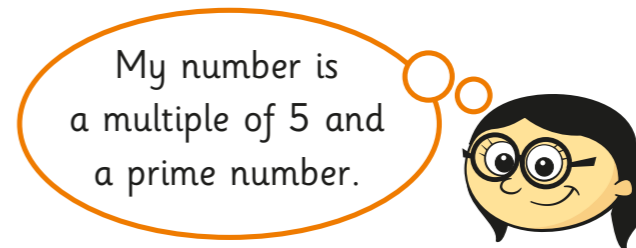


What two numbers is Amir thinking of?

e.g. and

Is there more than one possible solution?

b) Annie is thinking of a different number.



What number is Annie thinking of?

Is there more than one possible solution?

8 The number 13 is prime. If you reverse the digits, 31 is also prime. List all the 2-digit primes with the same property.

11, 13, 31, 17, 71, 37, 73, 79, 97

9 Here are some digit cards.



List all the 3-digit prime numbers you can make with these cards.

2 5 3 × not prime 5 2 3 ✓ prime

Explain how you arrived at this answer.

It must end in 3 and 253 = 11 × 23 so 523 is the only possible number.