

Have you mastered factors?

- a) Find at least two numbers less than 40 which have six factors.
- b) Find at least two numbers less than 40 which have four factors.



Champions' Challenge

Kurt thinks that even numbers have an even number of factors and odd numbers have an odd number of factors.

- 1. Find some examples which will help him to see that this is not true.
- 2. Explain how you can tell which numbers have an odd number of factors.



DO NOT LOOK AT THE ANSWERS BELOW UNTIL YOU ARE FINISHED!

Answers

Have you mastered factors?

- a. Any two from 12, 18, 20, 28 and 32.
- b. Any two from 6, 8, 10, 14, 15, 21, 22, 26, 27, 33, 34, 35, 38 and 39.

Champions' Challenge

- 1. Square numbers which are even, e.g. 16 and 36 have an odd number of factors. Odd numbers such as 15 and 21 have an even number of factors. Prime numbers have two factors, and all but the number 2 are odd numbers.
- 2. The only numbers with an odd number of factors are square numbers.