

# Identify and represent sets

**1** Are the two sets the same or different? Tick your answers.  
Give reasons for your answers.

a)  $A = \{1, 2, 3, 4\}$                        $B = \{4, 3, 2, 1\}$                       **same**    **different**  
                     

\_\_\_\_\_

\_\_\_\_\_

b)  $A = \{-1, -2, -3, -4\}$                        $B = \{1, 2, 3, 4\}$                                            

\_\_\_\_\_

\_\_\_\_\_

c)  $A = \{\text{even numbers}\}$                        $B = \{2, 4, 6, 8\}$                                            

\_\_\_\_\_

\_\_\_\_\_

d)  $A = \{\text{names of pets}\}$                        $B = \{\text{types of pets}\}$                                            

\_\_\_\_\_

\_\_\_\_\_

e)  $A = \{\text{letters in word "scare"}\}$      $B = \{\text{letters in word "cares"}\}$                          

\_\_\_\_\_

\_\_\_\_\_

f)  $A = \{\frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{5}{5}\}$                        $B = \{0.2, 0.4, 0.6, 0.8, 1\}$                                            

\_\_\_\_\_

\_\_\_\_\_

**2** List the elements of the sets.  
Use correct set notation.

a) Set A: months of the year

\_\_\_\_\_

\_\_\_\_\_

b) Set B: quadrilaterals with at least two right angles

\_\_\_\_\_

\_\_\_\_\_

c) Set C: factors of 27

\_\_\_\_\_

\_\_\_\_\_

d) Set D: square numbers less than 100

\_\_\_\_\_

\_\_\_\_\_

e) Set E: letters in "mathematics"

\_\_\_\_\_

\_\_\_\_\_

**3**

$\xi = \{\text{letters in the alphabet}\}$

a)  $A = \{\text{letters in "symmetry"}\}$

List the elements of set A.

\_\_\_\_\_

\_\_\_\_\_

b)  $B = \{\text{letters in "proportion"}\}$

List the elements of set B.

\_\_\_\_\_

\_\_\_\_\_

c) Which letters are in both set A and set B?

\_\_\_\_\_

\_\_\_\_\_



4

$\xi = \{\text{integers between 1 and 20 inclusive}\}$

List the elements of the sets.

a)  $A = \{\text{odd numbers}\}$

\_\_\_\_\_

b)  $B = \{\text{even numbers}\}$

\_\_\_\_\_

c)  $C = \{\text{multiples of 8}\}$

\_\_\_\_\_

d)  $D = \{\text{factors of 40}\}$

\_\_\_\_\_

5

Describe the sets in words.

a)  $\{4, 8, 12, 16, 20\}$

\_\_\_\_\_

\_\_\_\_\_

b)  $\{-4, -8, -12, -16, -20\}$

\_\_\_\_\_

\_\_\_\_\_

c)  $\{a, t, h, m, s\}$

\_\_\_\_\_

\_\_\_\_\_

d)  $\{1, 3, 7, 21\}$

\_\_\_\_\_

\_\_\_\_\_

e)  $\{35, 70, 105, 140, 175\}$

\_\_\_\_\_

\_\_\_\_\_

Compare answers with a partner.

Do any of the sets have more than one solution?

6

$\xi = \{\text{integers between 1 and 50 inclusive}\}$   
 $A = \{\text{factors of 100}\}$     $C = \{\text{even numbers}\}$   
 $B = \{\text{multiples of 5}\}$     $D = \{\text{odd numbers}\}$

a) List the elements in the sets.

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

\_\_\_\_\_

D \_\_\_\_\_

\_\_\_\_\_

b) List the elements that are in both set A and set B.

\_\_\_\_\_

c) Are any elements in both set C and set D? Explain your answer.

\_\_\_\_\_

\_\_\_\_\_

Compare answers with a partner.

