

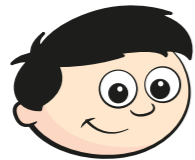
Find pairs of values (2)



1 Class 6 are trying to solve a number puzzle.

$$\triangle + \triangle + \bigcirc = 10$$

a)



Dexter

The triangle could be 3 and the circle could be 4

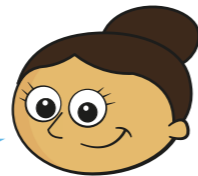
Do you agree with Dexter? yes

Explain why.

$$3 + 3 + 4 = 10$$

b)

The triangle is worth 4



Dora

What is the value of the circle in Dora's number puzzle?

$$\bigcirc = 2$$

c) Find other pairs of values that the triangle and circle could equal.

Find three pairs.

$$\triangle = 1 \quad \bigcirc = 8$$

$$\triangle = 5 \quad \bigcirc = 0$$

$$\triangle = 2 \quad \bigcirc = 6$$

2 a and b are whole numbers.

$$2a + b = 14$$

Complete the table to show different possible values for a and b .

a	0	1	2	3	4	5	6	7
$2a$	0	2	4	6	8	10	12	14
b	14	12	10	8	6	4	2	0
$2a + b$	14	14	14	14	14	14	14	14

3 c and d are both integers less than 15 but greater than zero.

$$3c - d = 2$$

Complete the table to show different possible values for c and d .

c	1	2	3	4	5
$3c$	3	6	9	12	15
d	1	4	7	10	13
$3c - d$	2	2	2	2	2

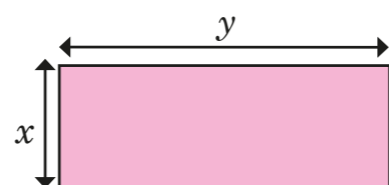
b) Explain why there are no other possible values for c and d .

If c was 16 d would be greater than 15

- 4 x and y are both multiples of 5 less than 100
If $2x = y$, circle the possible values of x and y .

$x = 20, y = 20$
 $x = 10, y = 20$
 $x = 20, y = 10$
 $x = 35, y = 70$
 $y = 90, x = 45$

- 5 Here is a rectangle.
 x and y are both integers.



The rectangle has a perimeter of 28 cm.

- a) Write an equation to represent the perimeter of the rectangle.

$2x + 2y = 28$

- b) List all the possible pairs of values for x and y .

- $x = 1, y = 13$ $x = 5, y = 9$
 $x = 2, y = 12$ $x = 6, y = 8$
 $x = 3, y = 11$
 $x = 4, y = 10$

Compare answers with a partner. How do you know you have found all the possible values?

- 6 Aisha is buying some stationery for school.
She spends exactly £1
List the possible combinations of pencils and pens that Aisha could have bought.



- 10 pencils 6 pens & 1 pencil
 2 pens & 7 pencils
 4 pens & 4 pencils

- 7 Ron has four digit cards.
- Two of the cards have the same value.
 - All of the cards are less than 10 but greater than zero.
 - All of the cards are odd.
 - The sum of the four cards is 24

Find two possible sets of cards.

Set 1 1 5 9 9
 Set 2 1 7 7 9

- 8 $2ab = 48$

- a) Find a pair of possible values for a and b .

e.g. $a = 6$ $b = 4$

- b) Work with a partner to find as many pairs of values as you can.