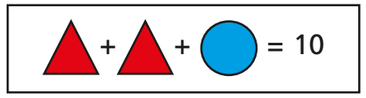
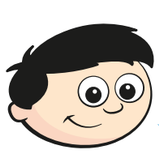
Find pairs of values (2)

1 Class 6 are trying to solve a number puzzle.



a)



The triangle could be 3 and the circle could be 4

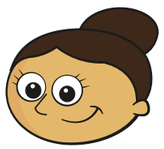
Dexter

Do you agree with Dexter? _____

Explain why.

b)

The triangle is worth 4



Dora

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

 =

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

Find three pairs.

 =  =

 =  =

 =  =

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						
b	14							
$2a + b$	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				
d	1				
$3c - d$	2	2	2		

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

4 x and y are both multiples of 5 less than 100

If $2x = y$, circle the possible values of x and y.

$x = 20, y = 20$

$x = 10, y = 20$

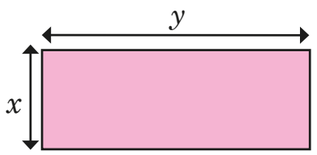
$x = 20, y = 10$

$x = 35, y = 70$

$y = 90, x = 45$

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.

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

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.

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 ☐ ☐ ☐ ☐

Set 2 ☐ ☐ ☐ ☐

8 $2ab = 48$

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

$a =$ ☐ $b =$ ☐

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