

1 Class 6 are trying to solve a number puzzle.

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

a)



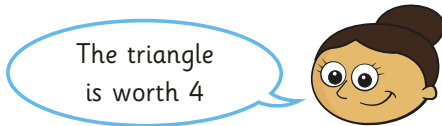
The triangle could be 3 and the circle could be 4

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 .

$$x = 20, y = 20$$

$$x = 20, y = 10$$

$$x = 10, y = 20$$

$$x = 35, y = 70$$

$$y = 90, x = 45$$



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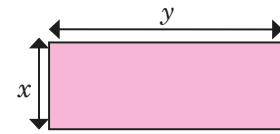
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5 Here is a rectangle.
 x and y are both integers.



The rectangle has a perimeter of 28 cm.

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

8 $2ab = 48$

- Find a pair of possible values for a and b .
- Work with a partner to find as many pairs of values as you can.