

1

worksheet

1. The sum of two numbers is 6, and one number is twice another number.

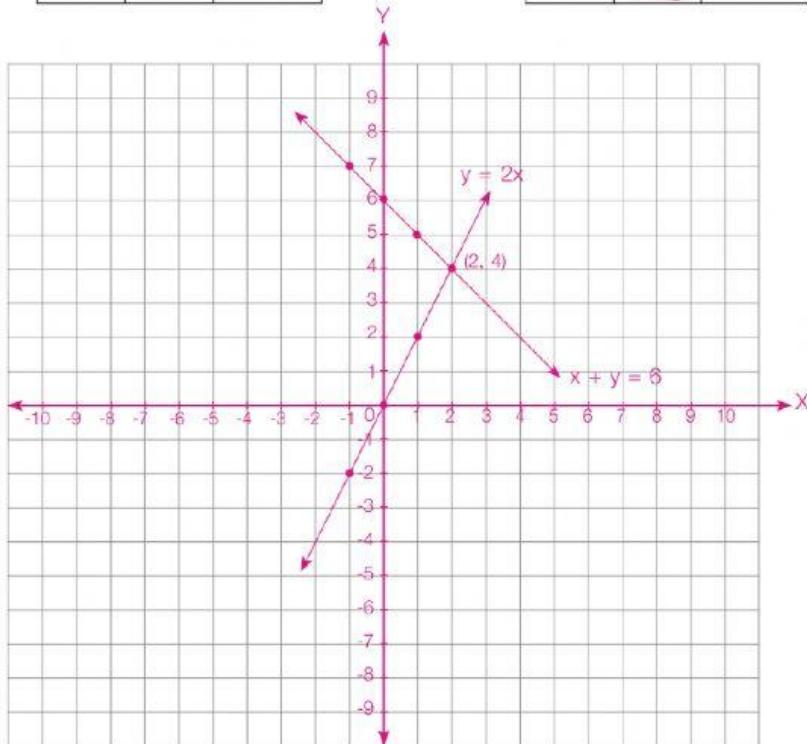
What are these two numbers?

When one number is x , and another is y , the system of equations consists of

equations $y = 2x$ and $x + y = 6$.

$y = 2x$		
x	y	(x, y)
2	4	(2, 4)
1	2	(1, 2)
0	0	(0, 0)
-1	-2	(-1, -2)

$x + y = 6$		
x	y	(x, y)
2	4	(2, 4)
1	5	(1, 5)
0	6	(0, 6)
-1	7	(-1, 7)



We can see that the point of intersection of equations $y = 2x$ and $x + y = 6$ is point (2,4).

Thus, $x = 2$ and $y = 4$

Check the answers $4 = 2(2)$

and $2 + 4 = 6$

Therefore, one number is 2, and another is 4.

1

worksheet

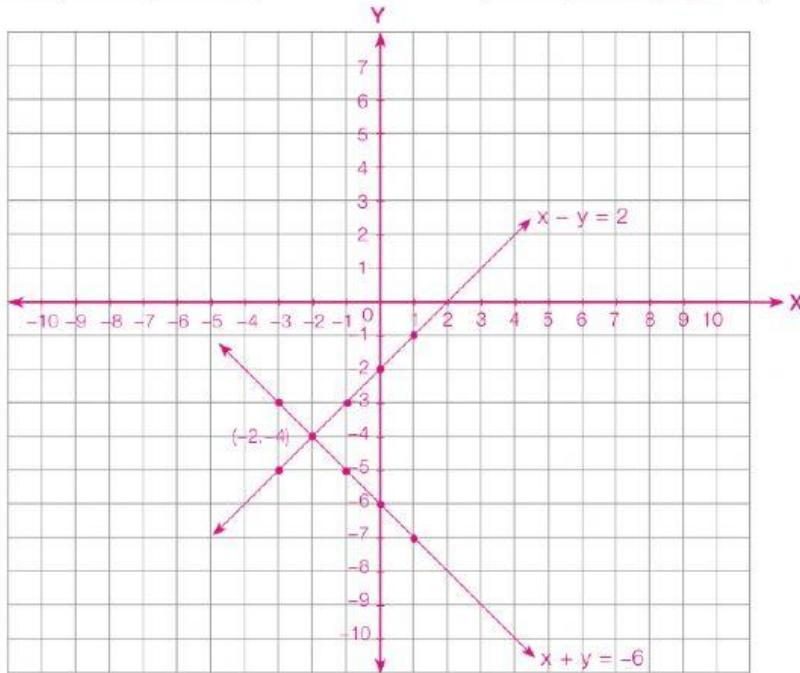
2. The sum of two numbers is -6 , and their difference is 2 . Find these two numbers.

When one number is x , and another is y , the system of equations consists of equations

$$x + y = -6 \text{ and } x - y = 2.$$

$x + y = -6$		
x	y	(x, y)
1	-7	(1, -7)
0	-6	(0, -6)
-1	-5	(-1, -5)
-2	-4	(-2, -4)
-3	-3	(-3, -3)

$x - y = 2$		
x	y	(x, y)
1	-1	(1, -1)
0	-2	(0, -2)
-1	-3	(-1, -3)
-2	-4	(-2, -4)
-3	-5	(-3, -5)



We can see that the point of intersection of equations $x + y = -6$ and $x - y = 2$ is point $(-2, -4)$.

Thus, $x = \boxed{}$ and $y = \boxed{}$

Check the answers $(-2) + (-4) = -6$

and $(-2) - (-4) = 2$

Therefore, one number is -2 , and another is -4 .