Name: .... Class: ....

Find two numbers based on sum and difference

1. The sum of two numbers **a** and **b** is 20 and their difference is 10. Find the two numbers **a** and **b**.

2. The difference of two numbers u and v is 18 and their sum is 90. Find the numbers u and v.

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Find two numbers based on sum and difference

1. The sum of two numbers **a** and **b** is 20 and their difference is 10. Find the two numbers **a** and **b**.

Since we have the sum and the difference, let's write a two variable equation with a a and b as variables.

So, a + b = 20 ..... ①   ----→ the sum of a and b

   a - b = 10 ..... ②   ----→ the difference of a and b

   2a = 30 ... ① + ②   ----→ Sum up the two equations

2a = 30

$$\frac{2a}{2} = \frac{30}{2}$$

a = 15

Now, substitute the value of a in equation 1 above to find b

a + b = 20

15 + b = 20

b = 20 - 15

b = 5

Therefore, a = 15 and b = 5

2. The difference of two numbers u and v is 18 and their sum is 90. Find the numbers u and v.

Let's write a two variable equation with u and v as variables

So, u - v = 18.... ①

   u + v = 90 ... ②

   2u = 108... ① + ②

   $$\frac{2u}{2} = \frac{108}{2}$$

   u = 54

Now substitute the value of u in equation 1 above to find v

54 - v = 18

54 = 18 + v

54 - 18 = v

v = 36.

Therefore, u = 54 and v = 36