

3 worksheet

From the following problems, explain your solutions.

- 1) The sum of two numbers is -42 , and their difference is 52 . What are these two numbers?

Let x be a number and let y be another number.

$$x + y = -42 \quad \text{--- ①}$$

$$x - y = 52 \quad \text{--- ②}$$

① + ②

$$2x =$$

$$x = \frac{10}{2}$$

$$x =$$

Substitute the value of x in ①.

$$5 + y =$$

$$y =$$

$$y =$$

Therefore, these two numbers are 5 and -47 .

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- 2) The difference of two numbers is 16, and three times the larger number is nine times as much as the smaller number. What are these two numbers?

Let x be the larger number and let y be the smaller number.

$$x - y = \quad \text{---} \quad \text{①}$$

$$3x = 9y \quad \text{---} \quad \text{②}$$

From ② $x = 3y \quad \text{---} \quad \text{③}$

From ③, substitute the value of x in ①.

$$3y - y = 16$$

$$\quad = 16$$

$$y = \frac{16}{2}$$

$$y = \quad$$

Substitute the value of y in ③.

$$x = 3(8)$$

$$x = \quad$$

Therefore, these two numbers are 8 and \quad