

# 6.1 Equations with Like Terms

## NOTES

### MATH 7

Write your  
questions here!



One of the best ways to solve equations is by \_\_\_\_\_

\_\_\_\_\_ are terms whose variables are the same.

Review: How do we combine like terms? (You can Rewatch lesson 4.2 if you forgot!)

Example 1:  $2a + 3b - 4a - 7b$

Example 2:  $-19 - 3x + x + 19$

You try these two:

Example 3:  $y - 12 + 43 - 5y$

Example 4:  $-2w + 7g + 2w - 7g$

How can Combining Like Terms help us when solving equations?

Example 5:  $4x + 3x + 5 = 26$

Example 6:  $6 + 2d + 6d = 18$

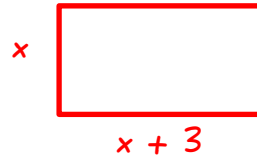
Example 7:  $-15 = 5 - 8 - 4h$

Example 8:  $6 + 2y + 4 - 3y = -10$

Let's Word-Problem it up!

Example 9

Find each side if the perimeter is 26 .



## SUMMARY:

Now,  
summarize  
your notes  
here!

## 6.1 Equations with Like Terms

## PRACTICE

Solve the following equations. SHOW ALL STEPS!!!!

1.  $2x + 3x = 10$

2.  $7x - 3x = 8$

3.  $3t + 2 + 5 = 16$

4.  $-8 = 2 + 4y + y$

5.  $9 = 4m - 3 + 2m$

6.  $10 = 3x + 8 - 4$

$$7. \quad p + 3p = -16$$

$$8. \quad 15 = -3d - 2d$$

$$9. \quad 8 - 2x + 8 - 2x = 20$$

$$10. \quad 2x - 4 - x = -8$$

$$11. \quad -8 = -10 - 3f + 2$$

$$12. \quad -400n = 1000 - 200$$

**MIXED REVIEW.** Solve the following one-step and two-step equations.

$$13. \quad 6 = 2 - 4y$$

$$14. \quad -2 = \frac{t}{5}$$

$$15. \quad \frac{x}{3} - 3 = 7$$

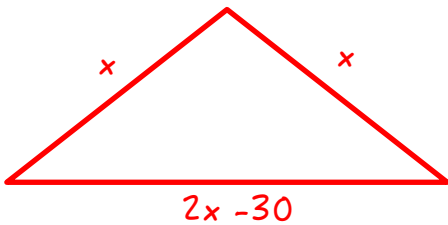
Solve the following equations. SHOW ALL STEPS!!!!

16.  $-8 = 2 + 2y - 12$

17.  $4y + y + 1 = -9$

For number 18, write an equation to model the situation and then solve it!

18. The perimeter of the triangle below is 90 inches. Find the value of  $x$ . Then, find each side.



Equation:

Answer:

### EXIT TICKET

Mr. Brust definitely did this one wrong. Bummer. Circle his mistake, explain why it's wrong, and then solve it correctly. Thanks!

$$6p - 8p + 2 = 30$$

$$-14p + 2 = 30$$

$$\underline{-2} \quad \underline{-2}$$

$$-14p = 28$$

$$\underline{-14} \quad \underline{-14}$$

$$p = -2$$