

6.2 Equations using the Distributive Property

NOTES

MATH 7

Write your
questions here!



Another tool for solving equations is by using the _____

We might also have to _____.

Review: How do we use the distributive property?

Example 1: $-2(4x - 7)$

Example 2: $-7(2x + 3)$

Now let's Solve Equations!

Example 3: $5(2x - 3) = -35$

Example 4: $2(3 - 8x) = 22$

What? *AND COMBINE LIKE TERMS?!?!?!?*

Example 5: $4(2x - 5) + 3x = 2$

Example 6: $6 - 10(d - 4) = 16$

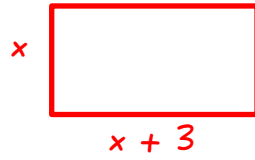
Example 7: $10 - 3(2x - 1) = -11$

Example 8: $\frac{1}{2}(12x - 14) + 1 = -24$

Let's Word-Problem it up!

Example 9

Use the distributive property to find x if the perimeter is 26 .



SUMMARY:

Now,
summarize
your notes
here!



6.2 Equations using the Distributive Property

PRACTICE

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

1. $4(x - 3) = 20$

2. $-42 = 6(3y - 5)$

3. $3t + 2t + 4 = 39$

$$4. \quad 3n + 2(n - 5) = 35$$

$$5. \quad 40 = 4 + 3(5v + 2)$$

$$6. \quad 40 = -4(4p - 3) + 2p$$

$$7. \quad 1.2p + 3.5(p - 2) = -21.1$$

$$8. \quad 5 = \frac{1}{3}(d - 6) + 1$$

$$9. \quad 2(3x - 4) + 10 - 2x = -22$$

MIXED REVIEW.... Keeping it Real. Real Easy.

$$10. \quad 6 - 3b = -9$$

$$11. \quad \frac{x}{3} - 3 = 6$$

$$12. \quad -\frac{4}{3}n = 12$$

13. Solve the following equation:

$$37 = 8v + 3(5v - 3)$$

14. Mr Sullivan and Mr. Brust solved these equations different ways. Who solved it correctly?

Solve: $3(4x - 1) = 33$

Mr. Brust's work:

$$\begin{aligned} 3(4x - 1) &= 33 \\ 12x - 3 &= 33 \\ \hline +3 &+3 \\ \frac{12x}{12} &= \frac{36}{12} \\ x &= 3 \end{aligned}$$

Mr. Sullivan's work:

$$\begin{aligned} \cancel{3}(4x - 1) &= \frac{33}{3} \\ 4x - 1 &= 11 \\ \hline +1 &+1 \\ \frac{4x}{4} &= \frac{12}{4} \\ x &= 3 \end{aligned}$$

Solve the following equations WITHOUT using the distributive property. (Like Mr. Sullivan did!)

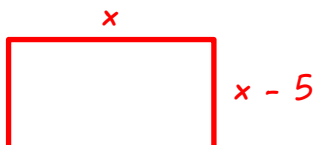
15. $4(x - 3) = 40$

16. $6 = \frac{1}{4}(d - 2)$ (hint: Multiply each side by 4, first!)

EXIT TICKET

Write an equation to model the situation using the distributive property and then solve it!

Find each side length if the perimeter of the rectangle below is 94 inches.



Equation:

Answer: