

Name: _____

Date: _____

Period: _____

If you were a superhero,
who would you be?

Classwork → Solving Equations

What grade are you going to earn on
this classwork?

Tool Box



1. Distributive Property
2. Combining Like Terms
3. Inverse Operations

Find the mistake in each of the following. Then, write a recommendation for what the student should do next time.

$$\begin{array}{r} -3x + 5 = 11 \\ -5 \quad -5 \\ \hline -3x = 6 \\ \frac{-3}{-3} \quad \frac{6}{-3} \\ \hline x = 3 \end{array}$$

$$\begin{array}{r} -3x + 5 = 11 \\ -5 \quad -5 \\ \hline -3x = 6 \\ \frac{-3}{-3} \quad \frac{6}{-3} \\ \hline x = 2 \end{array}$$

Solve the following equation in **more than one way**.

1) $10x + 11 = 3x - 10$

2) $10x + 11 = 3x - 10$

Solve for x:

3) $3x - 2 = 5x + 8$

4) $11x - 24 = 3x + 8$

5) $-4x + 9 = 5x - 18$

6) $5x + 8 = 3x - 12$

7) $7x - 5 = 4x + 10$

8) $4x - 3 = 11x + 18$

9) Kanye West is 68 inches tall. He still grows 1 inch per year. His son, North West, is 22 inches tall but grows 4 inches per year. How many years until North is as tall as Kanye?

- a) How tall is Kanye after 2 years? How tall is North after 2 years?
- b) How tall is Kanye after 7 years? How tall is North after 7 years?
- c) Write a mathematical expression for Kanye's height at any year.
- d) Write a mathematical expression for North's height at any year.
- e) How many years until North and Kanye are the same height?

10) Find the mistake in each of the following. Then, write a recommendation for what the student should do next time.

$$\begin{array}{r}
 8x + 10 = 23x - 65 \\
 -8x \quad -8x \\
 \hline
 10 = 15 - 65 \\
 \frac{10}{10} = \frac{-50}{10} \\
 \hline
 x = -5
 \end{array}$$

$$\begin{array}{r}
 8x + 10 = 23x - 65 \\
 -8x \quad -8x \\
 \hline
 10 = 15x - 65 \\
 -10 \quad -10 \\
 \hline
 15x - 75 \\
 \frac{15x}{15} = \frac{-75}{15} \\
 \hline
 x = -5
 \end{array}$$

ACT

If $3x + 7 = 28 - 5x$, then $x = ?$

What is the solution of $x + 3.4 = 20.91$?

- F. 24.31
- G. 23.95
- H. 17.87
- J. 17.51
- K. 6.15

- F. $\frac{21}{8}$
- G. $\frac{35}{8}$
- H. $\frac{23}{10}$
- J. $-\frac{35}{2}$
- K. $-\frac{35}{8}$

Solve the following in **more than one way**.

11) $-4(2x + 7) = 6x - 12$

12) $-4(2x + 7) = 6x - 12$

Solve for x:

13) $0.5(4x + 6) = 15$

14) $5(2x - 8) = 4x + 3$

15) $-3(2x - 8) = 4x + 4$

16) $5x + 10 = 11x + 6 - 7x$

17) $2x + 6 = 6x - 12 + 2x$

18) $13x - 11 = 9x + 5$

19) $15x + 7 = 7x - 17$

20) Tickets to a Mavs game cost \$45. Bags of popcorn costs \$6 per bag inside the arena. How many bags of popcorn can you buy if you have \$75?