Math 8

Our Goal: To learn to solve one-step equations
(CCSS 8.EE.7a, 8.EE.7b, MP2, MP7)

Warm Up: You will need your notebook and computer
Everything else, bags etc. on the shelves please

Today's Homework
1.1 Exercises, p.7-9: 2-36 (evens)

Previous Homework
None

Simplify the expression.

1. 5 + (−15)

2. 6 − 7

3. 10 • (−1)

4. $\frac{-30}{2}$

5. −1 • 0

6. 4 − (−2)

PEMDAS

Steps to tie your shoe	Steps to untie your shoe
1. put on socks	1. Untie shoe
2. put on shoe	2. take off shoe
3. tie your shoe	3. take off socks

Key Ideas

Addition Property of Equality

Words Adding the same number to each side of an equation produces an equivalent equation.

Algebra If $a = b$, then $a + c = b + c$.

Subtraction Property of Equality

Words Subtracting the same number from each side of an equation produces an equivalent equation.

Algebra If $a = b$, then $a - c = b - c$.

a. Solve $x - 7 = -6$

$+7 \quad +7$

$x = 1$

$1 - 7 = -6$ ✓

b. Solve $y + 3.4 = 0.5$

c. Solve $h + 2\pi = 3\pi$

$-2\pi \quad -2\pi$

$h = \pi$

Solve the equation. Check your solution.

1. $b + 2 = -5$
2. $g - 1.7 = -0.9$
3. $-3 = k + 3$

Solve the equation. Check your solution.

4. $r - \pi = \pi$
5. $t - \frac{1}{4} = -\frac{3}{4}$
6. $5.6 + z = -8$

Key Ideas

Multiplication Property of Equality

Words Multiplying each side of an equation by the same number produces an equivalent equation.

Algebra If $a = b$, then $a \cdot c = b \cdot c$.

Division Property of Equality

Words Dividing each side of an equation by the same number produces an equivalent equation.

Algebra If $a = b$, then $a \div c = b \div c$, $c \neq 0$.

a. Solve $-\frac{3}{4}n = -2$ $\div -\frac{3}{4}$ $\div -\frac{3}{4}$ $n = -2 \div -\frac{3}{4}$

$$\frac{-2}{1} \cdot \frac{-4}{3}$$

$$= \frac{8}{3} = 2\frac{2}{3}$$

b. Solve $\pi x = 3\pi$

Solve the equation. Check your solution.

7. $\frac{y}{4} = -7$

8. $6\pi = \pi x$

9. $0.09w = 1.8$

What value of k makes the equation $k + 4 \div 0.2 = 5$ true?

(A) −15 (B) −5 (C) −3 (D) 1.5

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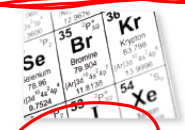
The *melting point* of a solid is the temperature at which the solid becomes a liquid. The melting point of bromine is $\frac{1}{30}$ of the melting point of nitrogen. Write and solve an equation to find the melting point of nitrogen.



n

$-7 = \frac{1}{30} \cdot n$

$30 \cdot -7 = \frac{30}{1} \cdot \frac{1}{30} \cdot n$

$-210 = n$

10. Solve $p - 8 \div \frac{1}{2} = -3$

11. Solve $q + |-10| = 2$

12. The melting point of mercury is about $\frac{1}{4}$ of the melting point of krypton. The melting point of mercury is −39°C. Write and solve an equation to find the melting point of krypton.