Warm Up:

Mrs. Hodges made Halloween goodie bags for her team members. Each bag had one $2 Butterfinger bar in it and several $3 chocolate bars. If she has 5 team members and she spent $70, how many chocolate bars were in each bag? Write an equation and then solve.

\[
5(2 + 3x) = 70
\]

\[
10 + 15x = 70
\]

\[
10
\]

\[
15x = 60
\]

\[
15
\]

\[
15
\]

\[
x = 4
\]

Write a word problem that could be represented by the equation

\[
200 - 2x = 80
\]
review homework
Equations with variables on both sides: Simplify each side, get the variables on the same side, then solve.

\[
\begin{align*}
4x + 6 &= 2x - 18 \\
2x + 6 &= -18 \\
2x &= -24 \\
x &= -12
\end{align*}
\]

\[
\begin{align*}
-3(x + 2) &= 2x - 1 \\
-3x - 6 &= 2x - 1 \\
-5x &= 5 \\
x &= -1
\end{align*}
\]

\[
\begin{align*}
2x + 8 &= 2(x + 4) \\
4x + 8 &= 2x + 8 \\
8 &= 8
\end{align*}
\]

\[
\begin{align*}
4(-x + 3) &= -x + 8 - 3x \\
-4x + 12 &= -4x + 8 \\
12 &= 8
\end{align*}
\]

if variable cancels out + what's left is true \( \Rightarrow \mathbb{R} \)
false \( \Rightarrow \emptyset \)
Blake has $200 and earns $5 each week. Aly has $350 but loses $3 each week. After how many weeks do they have the same amount of money?

Three more than twice a number is equal to eight more than the same number. What is the number?
Multi-Step Equations

Solve each equation.

1) $-20 = -4x - 6x$
2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$
4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$
6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$
8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$
10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$
12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$
14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$
16) $3n - 5 = -8(6 + 5n)$

17) $-(1 + 7x) - 6(-7 - x) = 36$
18) $-3(4x + 3) + 4(6x + 1) = 43$

19) $24a - 22 = -4(1 - 6a)$
20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$
<table>
<thead>
<tr>
<th>Equation</th>
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<tbody>
<tr>
<td>$3x - 4 = 2x + 1$</td>
<td>$-3(x + 8) = 9x$</td>
<td>$5x - 3 = 2x + 1 + 3x - 4$</td>
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<tr>
<td>$6(x - 3) = 2(2x + 8)$</td>
<td>$3x + 4 = 2(3x + 4)$</td>
<td>$-(4x + 10) = x$</td>
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