GOALS:
By the end of the lesson, YOU should be able to:
To solve multi-step Linear Equations


EXPRESSION
EQUATION

$$
n=?
$$

Simplify

$$
3 n+2=17
$$

What does it mean to SOLVE an EQUATION?

$$
\text { 1) } \left.\begin{aligned}
3 x-30 & =-15 \\
+30 & +30
\end{aligned} \right\rvert\,
$$


2) $60=\frac{1}{4} x+20$

$$
\begin{aligned}
& \frac{-20^{4}-20}{4 \cdot 40=\frac{1}{4} x^{4}} \\
& 160=x
\end{aligned}
$$

$$
\begin{aligned}
& \begin{array}{cc}
\begin{array}{c}
10+6 x-7 \\
-4 x \\
- \\
1
\end{array} 4 x-4 x \\
\hline 2 x+3 F-11 \\
-3 & -3 \\
\hline \frac{2 x}{2} ;-\frac{14}{2}
\end{array} \\
& \text { 4) } \begin{aligned}
& 4(x+8)-5=15 \\
& \hline
\end{aligned} \\
& 4 x+32-5=15 \\
& 4 x+27=15 \\
& -27-27 \\
& \frac{1}{4}=-\frac{2}{4} \\
& x \neq-7 \\
& x=-3
\end{aligned}
$$

Think: Cross-Multiply!

$$
\text { 5) } \begin{gathered}
\frac{4 x}{3} \neq \frac{32}{8} \\
4 x \cdot 8=3 \cdot 32 \\
\frac{32 x}{32}=\frac{96}{32} \\
x=3
\end{gathered}
$$

$$
\text { 6) } \begin{gathered}
\frac{4}{(x-2)} \frac{2}{(x-5)} \\
4(x-5)=2(x-2) \\
4 x-20=2 x-4 \\
-2 x-2 x
\end{gathered}
$$

Distribute, Combine like terms, Get Variables on one side, \& Solve. P. 10
8)

$$
\begin{aligned}
& \widehat{3(4 x-1)+4=-5(x+4)+3 x} \\
& 12 x-3+4=-5 x-20+3 x \\
& 12 x+1=-2 x-20 \\
& +2 x x=-2 x \\
& \frac{14 x+1}{}=-\frac{1}{-1} \\
& \begin{aligned}
\frac{14 x}{14} & =\frac{-21}{14} \\
x & =-1.5
\end{aligned} \quad-\frac{3}{2}
\end{aligned}
$$

Assignment: Workbook pp. 15-16

