Created by $\operatorname{Mr}$. Lischwe
WARMUP 11/ ( The most likely sum when $\left.\begin{array}{c}\text { you roll two dice }\end{array}\right)$

1) Copy the diagram and use it to figure out how many squares match up to each " $x$ ".


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

2) Write an equation to match the picture and solve it.

Malke sure there is a whiteboard, marker, \& eraser in your desk!

## COLLECT WARMUPS

## NOTE ABOUT ALEKS

-For this weekend ONLY, I will extend the ALEKS deadline until Monday at midnight.


## Equations w/ Variables on Both Sides

Objective:

- Solve equations with variables on both sides
- Understand the difference with when they're on the same side and when they're not
- 2 variable terms on the SAME SIDE:
- Combine like terms
- 2 variable terms on OPPOSITE SIDES:
" "Get rid" of one of them: add or subtract the x"s on both sides the same way you do with regular numbers


## WHITEBOARD EXPECTATIONS

-SHOW YOUR WORK!
-Hold it up when done
-Early finishers should check their solution.
-Offer help if someone is stuck!

## WHITEBOARDS

$$
\begin{gathered}
3 x+2 x=45 \\
5 x=45 \\
x=9
\end{gathered}
$$

Early finishers: Check your answer!

## WHITEBOARDS

$$
\begin{gathered}
4 x=2 x+18 \\
\frac{-3 x}{2 x}=18 \\
x=9
\end{gathered}
$$

Early finishers: Check your answer!

## WHITEBOARDS

$$
\begin{gathered}
\frac{6 x-2 x}{4 x=88}=88 \\
x=22
\end{gathered}
$$

Early finishers: Check your

## WHITEBOARDS

Early finishers: Check your
answer!

## WHITEBOARDS

$$
\begin{aligned}
& \frac{3 x-16=-2 x+34}{+2 x}+2 x+16=34 \\
& \begin{array}{c}
5 x-16 \\
5 x=50
\end{array} \\
& x=10
\end{aligned}
$$

Early finishers: Check your

## WHITEBOARDS

$$
\begin{gathered}
2 x+9+5 x+8=24 \\
\begin{array}{c}
7 x+17=24 \\
-17 \\
7 x=7
\end{array} \\
x=1
\end{gathered}
$$

Early finishers: Check your

## WHITEBOARDS

$$
\begin{aligned}
& \mathrm{x}=\frac{13}{4} \text { or } 3.25
\end{aligned}
$$

Early finishers: Check your
answrerl

## WHITEBOARDS

Early finishers: Check your
answer!

## WHITEBOARDS

$$
\begin{aligned}
& \frac{4 x+4=x-11}{\frac{x}{3 x+4}=-x}+ \\
& 3 x=-16=-5
\end{aligned}
$$

Early finishers: Check your

SOME FOR YOUR NOTES:

SOLVE AND CHECK:

$$
\frac{\begin{array}{c}
-3 x+31=2 x+6 \\
+3 x
\end{array}}{+3 x} \begin{gathered}
31=5 x+6 \\
\frac{-6}{-6}=\frac{5 x}{5} \\
5=x
\end{gathered}
$$

$$
-3(5)+31=2(5)+6
$$

$$
-15+31=10+6
$$

$$
16=16
$$

## SOME FOR YOUR NOTES...

## SOLVE

$5 x+10-3 x=12-4 x-44$

$$
\begin{aligned}
& 2 x+10=-32-4 x \\
& +4 x \\
& +4 x+16=-32 \\
& +10 \\
& +6 x=\frac{-42}{6} x=-2
\end{aligned}
$$

FRACTIONS？！？！？
SOLVE

$$
\begin{aligned}
& --32+\frac{2}{3} \not x=\frac{7}{3} x+3 \\
& \text {-寿× } \times \frac{2}{3} \times \\
& \frac{3}{5} \cdot \frac{-35}{1}=\frac{-105}{5}=-21 \\
& -32=\frac{5}{3} x+3 \\
& -3 \\
& \text { (敦) }-35=\frac{8}{3} \times \cdot\left(\frac{23}{5}\right) \\
& -21=x
\end{aligned}
$$

## WHITEBOARDS

$$
\begin{gathered}
8 x+7-5 x=11+x \\
\begin{array}{c}
3 x+7=11+x \\
\frac{2 x+1}{2 x}=1 \\
x
\end{array}=2
\end{gathered}
$$

Early finishers: Check your answer!

## WHITEBOARDS



Early finishers: Check your answer!

## WHITEBOARDS

$$
\begin{aligned}
& 2 \mathrm{x}+7=5 \mathrm{x}+35 \\
& x=-\frac{28}{3} \text { or }-9 \frac{1}{3}
\end{aligned}
$$

Early finishers: Check your

## WHITEBOARDS

$$
\begin{aligned}
& 15-\frac{1}{6} x=\frac{1}{6} x-1 \\
& x=48 \\
&+1 / 6 x \\
& 16 \rightarrow 48 \\
&=\frac{2}{6} x
\end{aligned}
$$

Early finishers: Check your
answer!

