## Warmup 11/ (The age you are if you were born in December of 1988)

 In one physical education class, $\frac{5}{8}$ of the students were playing basketball. After 3 more students joined, 18 students were playing basketball.$$
\begin{aligned}
\frac{5}{8} x & =18+3 x \\
18 & =\frac{5}{8} x-3
\end{aligned}
$$



1) Copy all the equations that could represent this situation.
2) Find how many students were in the class. 24 students
3) Check your solution by substituting it into one of the valid equations.

## Warmup (continued)

4) Write and solve the equation represented by this boxes-and-apples diagram.


## p. 157 (4-8, 10)

4) Infinite Solutions
5) No Solution
6) $t=62$
7) $x=-6$
8) $x=5$
9) $a . b+1.5(b+2)+15+2 b-9=90$
b. 18 students

## Cards Review - Expectations

1. This is a group activity, but the test on Friday is individual. DO NOT just let one person do the work and then copy them. IF YOU ARE CONFUSED, YOU MUST ASK YOUR GROUP!
2. If you understand a problem but someone in your group doesn't, YOU MUST DO YOUR BEST TO TEACH THEM. We are a community of math learners - let's help each other out!
3. If you finish a problem before it's time to rotate, use this time to make sure everyone understands and has the right work shown. You may also go back to previous problems you didn't finish.
4. STAY ON TASK AT ALL TIMES!
5. WHISPERING/QUIET TALKING ONLY!

## Solve each equation:

a. $5 x+75=75+5 x$
b. $5 x+75=-5 x+75$
c. $\mathbf{5 x}-\mathbf{7 5}=\mathbf{5 x}+\mathbf{7 5}$
d. $75-5 x=5 x-75$

## Infinite Solutions

$\mathrm{x}=0$
No solution
$x=15$


## Solve the equation:

$$
4+2(6 x-10)-9 x=-4(3 x-3 x+12-8)
$$

LEFT SIDE SIMPLIFIES TO: 3x - 16
RIGHT SIDE SIMPLIFIES TO:- 16

## So you should get: <br> $3 x-16=-16$

$$
x=0
$$



Find the perimeter of this rectangle.

## 50 cm


$(4 x+8) c m$
Make top = bottom, $x=10.5$
Perimeter = 142 cm
2 xcm


$$
x+x+x+x+3 x+(x-6)=90
$$

## Then go from there...

- Doc, Grumpy, Happy, Sleepy, Bashful, Sneezy, and Dopey were all mining for jewels. Doc, Grumpy, Bashful, and Dopey all found the same amount of jewels. Happy was extra energized and found triple the amount that Doc (and the other three) did. Sneezy was too busy sneezing and found 6 fewer jewels than Doc (and the other three) did. Sleepy fell asleep and didn't find any jewels. Altogether, the dwarves found 90 jewels. How many jewels did each dwarf find?



## $\mathrm{x}=$ \# of days <br> $90-3 x=1.5 x$ <br> 20 days; both hair = 30 feet

- Rapunzel's hair was originally 90 feet long, but something strange has happened, and her hair is starting to shrink. Her hair is getting 3 feet shorter every day. Meanwhile, Lord Voldemort's head was originally bald, but something equally strange has happened, and his hair is growing 1.5 feet per day.
- Define a variable and write an equation to find out when their hair would be the same length.
- How long will it take for Rapunzel's and Lord Voldemort's hair to be the same length? How long will their hair be at this noint?

- Solve both equations. Choose one of the equations and check your answer.

$$
\frac{4 x-4}{4}+4=44
$$

FIRST subtract 4 on both sides, then multiply both sides by 4, then solve from there

$$
x=41
$$



- From ground level to the tip of the torch, the Statue of Liberty and its pedestal are 92.99 meters tall. The pedestal is 0.89 meter taller than the statue. How tall is the Statue of Liberty? (Just the statue part)


$$
\begin{aligned}
& \text { Statue }=s \\
& \text { Pedestal }=s+0.89 \\
& \text { Statue }+ \text { Pedestal }=92.99 \\
& s+(s+0.89)=92.99 \\
& s=46.05 \text { meters }
\end{aligned}
$$



## HOMEWORK: STUDY!!!

- Correcting/redoing homework is a GREAT way to study!!!
- p. 157 assignment
- Scavenger Hunt
- Cards review
- Extra Practice/Challenge Worksheets
- No Solution/Infinite Solutions Worksheet
- These answer keys will ALL be posted on my website!

