4-6: Learning Goals

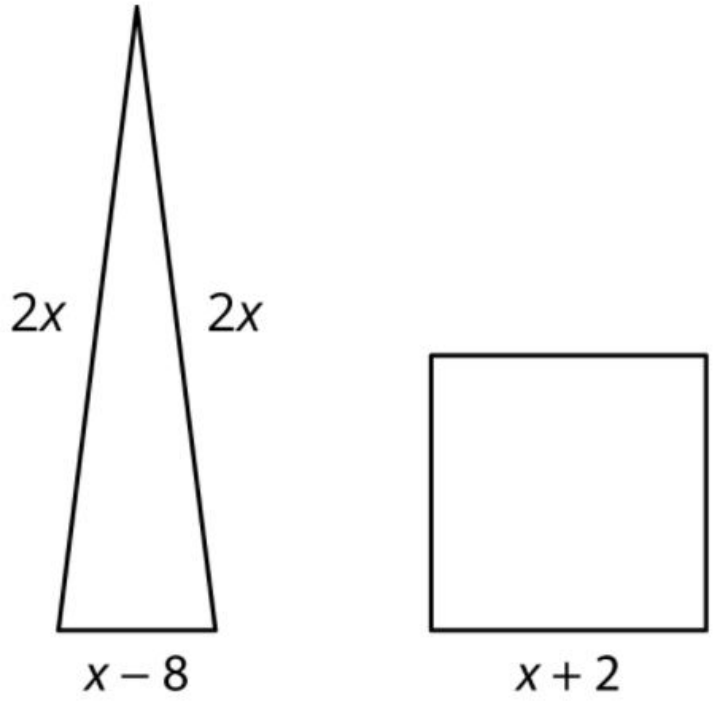
- Let's solve linear equations like a boss.

4-6-1: Equal Perimeters

The triangle and the square have equal perimeters.

1. Find the value of x.

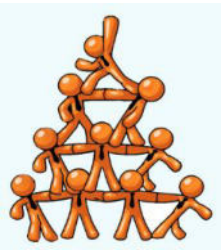
2. What is the perimeter of each of the figures?



4-6-2: Predicting Solutions

$$5x = 6x$$

$$5x = -16.5$$



4-6-2: Predicting Solutions

Without solving, identify whether these equations have a solution that is positive, negative, or zero.

1. $\frac{x}{6} = \frac{3x}{4}$
2. $7x = 3.25$
3. $7x = 32.5$
4. $3x + 11 = 11$
5. $9 - 4x = 4$
6. $-8 + 5x = -20$
7. $-\frac{1}{2}(-8 + 5x) = -20$

4-6-3: Which Would You Rather Solve?

Here are a lot of equations:

A. $-\frac{5}{6}(8+5b) = 75+\frac{5}{3}b$

B. $-\frac{1}{2}(t+3)-10 = -6.5$

C. $\frac{10-v}{4} = 2(v+17)$

D. $2(4k+3)-13 = 2(18-k)-13$

E. $\frac{n}{7}-12 = 5n+5$

F. $3(c-1)+2(3c+1) = -(3c+1)$

G. $\frac{4m-3}{4} = -\frac{9+4m}{8}$

H. $p-5(p+4) = p-(8-p)$

I. $2(2q+1.5) = 18-q$

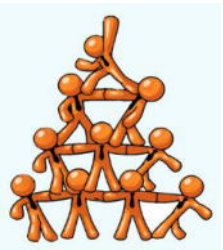
J. $2r+49 = -8(-r-5)$

1. Without solving, identify 3 equations that you think would be least difficult to solve and 3 equations you think would be most difficult to solve. Be prepared to explain your reasoning.

2. Choose 3 equations to solve. At least one should be from your "least difficult" list and one should be from your "most difficult" list.

4-6: Lesson Synthesis

Write an equation with a variable and a constant term on each side that you would look at and consider difficult to solve.



4-6: Learning Targets

- I can solve linear equations in one variable.

4-6-4: Think Before You Step

1. Without solving, identify whether this equation has a solution that is positive, negative, or zero:

$$3x - 5 = -3$$

2. Solve the equation.

$$x - 5(x - 1) = x - (2x - 3)$$