

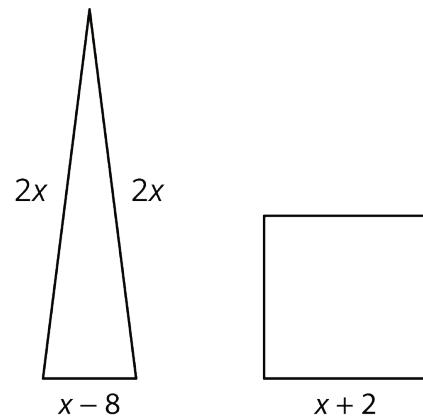
# Unit 4 Lesson 14: Strategic Solving

## 1 Equal Perimeters (Warm up)

### Student Task Statement

The triangle and the square have equal perimeters.

1. Find the value of  $x$ .
2. What is the perimeter of each of the figures?



## 2 Predicting Solutions

### Student Task Statement

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.  $-\frac{1}{2}(-8 + 5x) = -20$

### 3 Which Would You Rather Solve?

#### Student Task Statement

Here are a lot of equations:

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

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

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

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

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

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

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

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

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

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.