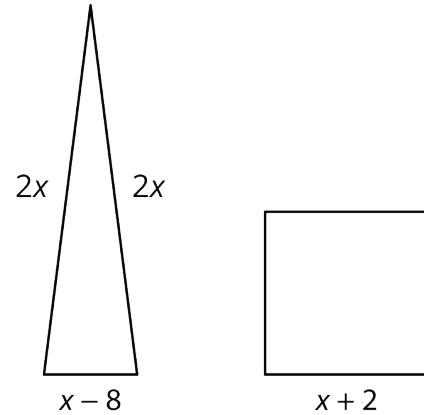# Unit 4 Lesson 6: Strategic Solving

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

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.