TOPIC: INTRO TO PROBLEM SOLVING

Word Problem Solving Strategy

◆ Word problems could be tricky, but we can use these steps to break them down.

EXAMPLE

A rectangular field's length is four times its width. If the perimeter of the field is 500 yards, what are the field's dimensions?

1) Understand the problem:

- Read & *reread* the problem,
- Draw a picture if needed,
- Identify & name the _____.

2) Build equation(s) that models the problem.

3) Solve the equation.

4) State the answer in the context of the problem.

5) Check your solution (both to the *equation* and in the _____ of the problem).

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PRACTICE Find each unknown number.

(*A*) One number is nine less than another. Their sum is negative twenty-seven.

(*B*) If half of a number is added to $\frac{2}{5}$, the result is the same as subtracting $\frac{1}{10}$ from the number.

HOW TO: Solve Word Problems

1) **Understand** the problem
   - Read & *reread* the problem
   - Draw a picture if needed
   - Identify & name the unknown
2) **Build** an equation that models the problem
3) **Solve** equation
4) Write the sentence as a **full sentence**
5) **Check** your solution (both to the equation and in the context of the problem)

PRACTICE

Patricia has 30 meters of fencing to make a rectangular garden in her backyard. She wants the length to be 5 meters more than the width. Complete steps 1 & 2 of the word problem solving process to set up an equation Patricia could use to find the width of her rectangular fence.

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PRACTICE

Jordan is designing a picture frame for a poster. The perimeter of the frame is 80 cm. The length is 12 cm longer than its width. Identify the dimensions of this poster.

EXAMPLE

A triangle-shaped garden is designed such that two sides of the triangle are 8 and 12 meters long, and the angle between these sides is 30° less than twice the measure of another angle in the triangle, x. The third angle is 20° more than x. Solve for the angles of the triangle.

Hint: The sum of all angles inside a triangle is equal to 180°.