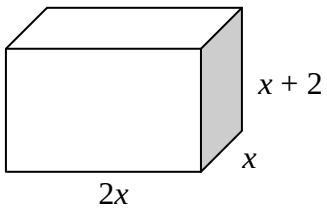
Algebra 2H Name_____
Worksheet 5E
5.5-5.6 Word Problems

Write and solve an equation for each word problem. Use any algebraic method you wish. Give answers as integers, fractions, or decimals rounded to the nearest tenth.

1. A rectangular field with area 5000 square meters is enclosed by 300 meters of fencing. Find the dimensions of the field.

2. A rectangular garden measures 12 meters by 14 meters. If the width and length are increased by the same number of meters, the area will increase to 255 m^2. What will be the dimensions of the larger garden?

3. The total area of the rectangular prism shown is 36 m^2. Find the value of x.



4. The distance required for a car traveling at r mph to come to a complete stop is given by the formula $d = 0.05r^2 + r$. What is the approximate speed of a car that requires 240 feet to stop?

5. A positive number is 1 more than its reciprocal. Find the number.

6. The top of a 20-foot ladder is 4 feet farther up a wall than its foot is from the bottom of the wall. How far is the foot of the ladder from the wall?

7. A box with height $x + 5$ cm has a square base with side length x cm. A second box with height $x + 2$ cm has a square base with side length $x + 1$ cm. If the two boxes have equal volumes, find the value of x.