Algebra 2—H Name_____

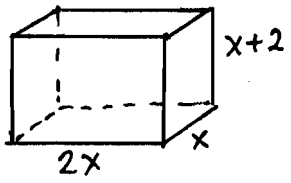
Chapter 5 Word Problems (5.5 & 5.6)

Write and solve an equation for each word problem. Use any algebraic method you know. Round decimal answers 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. Holly has a rectangular garden that measures 12 meters by 14 meters. She wants to increase the area to 255 m^2 by increasing the width and length by the same number. What will be the dimensions of the new garden?

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



4. The distance d required for a car traveling at r mph to come to a complete stop is given approximately by the formula $d = 0.05r^2 + r$. If a car required 240 feet to stop, what was its approximate speed?

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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 x cm. A second box with height ($x+2$) cm has a square base with side ($x+1$) cm. If the two boxes have the same volume, find the value of x.

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