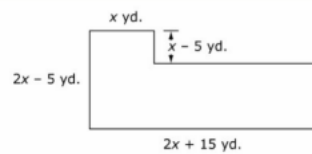


1. A town council plans to build a public parking lot. The outline below represents the proposed shape of the parking lot. Write an expression for the area, in square feet, of this proposed parking lot.



2. To be safe, a ladder must lean 75° to the ground. If a ladder is 12' long, how high up the wall can it reach?

3. To answer the following, refer to the equation $z = \frac{3y}{x}$ where x , y , and z are all positive.
- a. If x is held constant and y increases, how does z change?

4. The Student Council sponsored a talent show to raise money. They charged \$5 admission for each adult and \$2 for each student. A total of 248 people attended the show and they made \$715. How many students and how many adults attended the talent show?

5. Describe what a rotation of an image means. Write the 4 rotation rules we learned in class. Finally, explain WHY a rotation is an isometry.

6. Is this function even, odd, or neither? $f(x) = x(x - 1)(x + 1)$

7. Identify the inverse of the function: $f(x) = \log_2(x + 3) - 5$

8. What are the 5 triangle congruence postulates/theorems? Draw an example for each one below:

9. A 61 inch goal post is leaning against a fence. If the post is 32 inches away from the base of the fence, what angle is formed between the ground and the post?

10. A 18 foot ladder is placed against a wall at 44° with the ground. How far away from the wall is the base of the ladder?