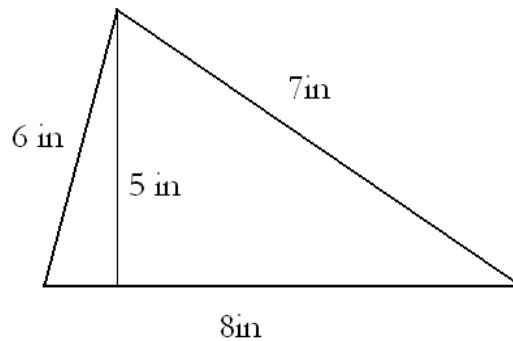


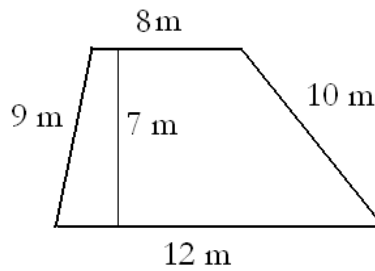
1. We toss a coin seven times.
 - (a) How many outcomes are possible?
 - (b) How many different ways can we get two times heads and five times tails?
2. We throw a die twice.
 - (a) How many outcomes are possible where the sum of the two numbers rolled is less than five?
 - (b) How many outcomes are possible where the two numbers rolled are different?
3. Ten points are given on a circle. We connect every point with all other points on the circle.
 - (a) How many line segments are drawn?
 - (b) How many different triangles are there on the figure?
 - (c) How many different four-sided polygons are there on the figure?
4. The population of a town has decreased from 450 000 to 418 500. What percent of a decrease does this represent?
5. (This problem is about the fact that $20 + 20$ is not always 40.) Ten years ago, the population of a town was 60 000. After five years, the population has increased by 20%. After another five years, the population again has increased by 20%.
 - (a) How many people live in the town today?
 - (b) By what percent did the population grow in the last ten years?
6. We borrowed \$5000 for three years, with a simple annual interest rate of 8%. How much do we need to pay back at the end of the three years?
7. We borrowed \$5000 for three years, with a compound annual interest rate of 8%. How much do we need to pay back at the end of the three years?
8. Find $n(A \cup B)$ if we know that $n(A) = 8$, $n(B) = 11$, and $n(A \cap B) = 4$.
9. The complement of an angle is 6° less than three times the angle. Find the angle.

10. Consider the triangle shown on the picture below.



- (a) Find the perimeter of the triangle. Include units in your answer.
- (b) Find the area of the triangle. Include units in your answer.

11. Consider the trapezoid shown on the picture below.



- (a) Find the perimeter the trapezoid. Include units in your answer.
- (b) Find the area of the trapezoid. Include units in your answer.

12. Consider a circle with radius 17 ft long.

- (a) Find the circumference the circle. Include units in your answer.
- (b) Find the area of the circle. Include units in your answer.