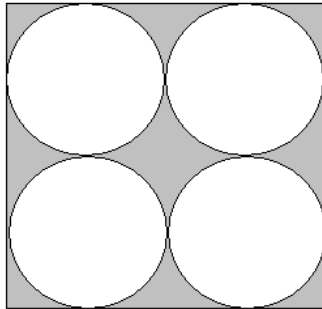
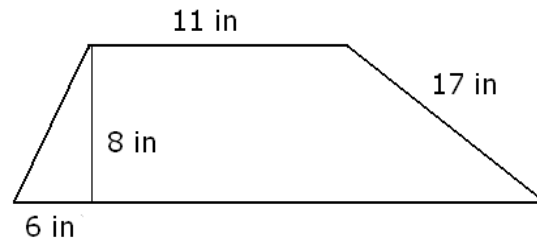


1. We borrowed \$ 5000 for two years, with a simple annual interest rate of 7%. After 10 months, we make a partial payment of \$800. After an additional 7 months, we make another partial payment of \$850. How much do we have to pay at the end of the two years?
2. We placed \$10000 into a bank account with an annual compound interest rate of 8%. How much money do we have in the account after 15 years?
3. A and B are sets such that $n(A) = 8$, $n(B) = 13$, and $n(A \cup B) = 17$.
 - (a) Find $n(A \cap B)$
 - (b) We randomly choose an element x of A . What is the probability that x is also an element of B ?
 - (c) We randomly choose an element x of B . What is the probability that x is also an element of A ?
4. We roll two dice. What is the probability that the difference between the two numbers rolled is 2?
5. We toss three coins. What is the probability that we end up with two tails and a head?
6. How many 3-element subsets does a set A has if $n(A) = 18$?
7. Two sides of a right triangle are 8 in and 17 in long. Find the length of the third side.
8. The complement of an angle is 5° less than four times the angle. Find this angle.
9. Find the area of the shaded region on the picture below. The sides of the square are 8 cm long.



10. Consider the trapezoid shown on the picture.



- (a) Find the perimeter of the trapezoid. Include units in your computation and answer.
- (b) Find the area of the trapezoid. Include units in your computation and answer.
- (c) The base of a solid is this trapezoid. Find the volume of the solid if its height is 6 in.
- (d) The base of a pyramid is this trapezoid. Find the volume of the pyramid if its height is 6 in.
11. We have a bag, with 10 marbles in it. 5 are red, 3 are blue, and 2 are yellow. We randomly pull a marble.
- (a) What is the probability of pulling a red marble?
- (b) What is the probability that we pull a blue marble?
12. Sally got two raises, first a 5% raise and then a 10% raise.
- (a) How much is she making after the two raises if her salary was originally \$1200 per month?
- (b) Your result in part a) represents what percent of a change?
13. How many rectangles are there on the picture below?

