1. After we took inventory, the results were as follows. Among 150 books, 105 were still used in courses, 99 were related to math, and 95 were written by men. 71 were still used in courses and related to math, 68 were still used in courses and were written by men, and 66 were related to math and written by men. 41 were still used in courses, related to math, and written by men.

   (a) Draw a Venn diagram depicting this data.

   (b) How many books are not in use anymore?

   (c) How many books are written by a woman and math related?

   (d) How many books are written by a woman, not math related and not in use anymore?

   (e) How many books are not math related?

2. A book went on a 25% discount. The sale price is \$40.5. Find the original price.

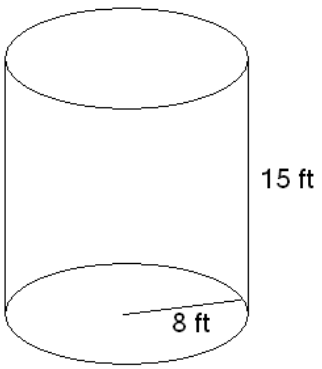
3. Find the volume of a cone with a circular base with radius of 25 cm, and height of 150 cm.

4. Sue's salary was raised from \$1600 to \$1712. What percent of a raise does this represent?

5. Find the distance between $A(-1,-5)$ and $B(-4,-1)$.

6. Two sides of a right triangle are 24 cm and 25 cm. Find the third side.

7. Find the volume of the cylinder shown on the picture below.



8. We borrowed \$2000 for a year, with an annual simple interest rate of 6%. After 5 months, we make a partial payment of \$900. How much money do we owe at the end of the year?

9. We borrowed \$3500 for two years, with an annual simple interest rate of 8%. After 9 months, we make a partial payment of \$800. After an additional 6 months (i.e. 15 months after the borrowing date) we make another partial payment of \$1000. How much money do we owe at the end of the two years?

10. We have placed \$ 10 000 into a bank account, with an annual compound interest rate of 6%. How much money do we have in the account after 20 years?

11. We toss a die twice in a row.

    (a) What is the probability that we get a double 4?

    (b) What is the probability that we roll a 3 first and then a 4?

(c) What is the probability that we roll a 3 and a 4?

(d) What is the probability that the first number rolled is larger than the second number rolled?

(e) What is the probability that the sum of the two numbers rolled is 9?

(f) What is the probability that the sum of the two numbers rolled is odd?

(g) What is the probability that the product of the two numbers rolled is odd?