Section 1.5

Video 1

1) Find two consecutive integers whose product is 72.

2) Find two positive consecutive even integers whose product is 288.

3) Find two negative consecutive odd integers whose product is 575.

Video 2

4) The length of a rectangular parking lot is 100 feet more than twice the width. If the area of the parking lot is 60,000 square feet, find the dimensions of the parking lot.

5) A rectangular piece of cardboard is 4 inches longer than it is wide. Squares with sides 1 inch long are cut from the four corners, and the flaps are folded upwards to form an open box. If the volume of the box is 60 cubic inches, find the dimensions of the original piece of cardboard.

Video 3

6) A soda can has a height of 12.2 cm, and its volume is 355 cubic centimeters. Find the radius of the can, rounded to the nearest hundredth of a centimeter.

7) If a can has a height of 12 cm and a surface area of 400 square cm, find its radius. Round to the nearest tenth of a centimeter.

Video 4

8) A right triangle has legs of 8 inches and 15 inches. Find the length of its hypotenuse.

9) One leg of a right triangle is 9 inches, and the hypotenuse is 16 inches. Find the length of the other leg, rounded to the nearest tenth of an inch.

10) The length of a rectangle if 4 inches more than its width. If the diagonal of the rectangle is 20 inches, find the length and width of the rectangle. Round to the nearest hundredth of an inch.

11) A guy wire 50 feet long runs from the top of a pole to a spot on the ground. If the height of the pole is 8 feet more than the distance from the base of the pole to the spot where the guy wire is anchored, how tall is the pole? (Round to the nearest tenth of a foot.)

Video 5

12) A tourist is standing on a cliff above a beach. She throws a rock upward at a speed of 70 feet per second from a height of 90 feet above the beach.

How long will it take until the rock lands on the beach? Round to the nearest tenth of a second.

13) A projectile is launched at an initial velocity of 36 ft/s from the top of a building 15 feet high. When will the projectile be at a height of 30 feet? (Round to the nearest hundredth of a second.)