1) The length and the width of a rectangle are 6 m and 4 m. When each dimension is increased by the same amount, the area of the new rectangle is 50$ m^{2}$.Find the dimensions of the new rectangle in exact form and then, to the nearest tenth of a meter.

2) The sum of two numbers is 14 and their product is 37. What are the numbers? Give answers in both exact form and to the nearest hundredth.

3) The size of a television screen is usually stated as the length of the diagonal. A screen has a 38-cm diagonal. The width of the screen is 6 cm more than the height. Find the dimensions of the screen to the nearest tenth of a centimeter.

4) A rectangular piece of tin 50 cm by 40 cm is made into a lidless box of base area 875 $m^{2}$ by cutting squares of equal sizes from the corners and bending up the sides. Find the side length of each square and the volume of the box.

5) A truck travelled from Calgary to Spokane, a distance of 720 km. On the return trip, the average speed was increased by 10 km/h. If the total driving time was 17 hours, what was the average speed from Calgary to Spokane?

6) A plane flew 4200 km from Glasgow to Halifax into a head wind. With a tail wind, the plane flew 100 km /h faster on the return trip. The total flying time from Glasgow to Halifax and back was 13 km. What was the flying speed from Glasgow to Halifax?

7) Is it possible for a rectangle with a perimeter of 44 m to have an area of 121 $cm^{2}$?