


Solve the following:

- The length of a rectangle is 2 times its width. The area of the rectangle is 72 square inches. Find the dimensions of the rectangle.
- The length of a rectangle is 4 times its width. The area of the rectangle is 144 square inches. Find the dimensions of the rectangle.
- The length of a rectangular garden is 4 yards more than its width. The area of the garden is 60 square yards. Find the dimensions of the garden.

4. The width of a rectangle is 11 inches less than its length. Find the dimensions of the rectangle if the area is 80 square inches.
- $w = l - 11$


$80 = l(l - 11)$
 $80 = l^2 - 11l$
 $0 = l^2 - 11l - 80$
 $0 = (l - 16)(l + 5)$

$w = l - 11$

$w = 5$

$l = 16$
5. The length of a rectangle exceeds its width by 3 inches. The area of the rectangle is 70 square inches, find its dimensions.

6. The product of two consecutive integers is 56. Find the integers.

7. The product of two consecutive odd integers is 99. Find the integers.

(BONUS on the QUIZ!)

8. The product of two consecutive integers is three less than three times their sum. Find the integers.

integer 1: n

5 and 6

integer 2: $n+1$

$$n(n+1) = 3(n+n+1) - 3$$

$$n^2 + n = 3(2n+1) - 3$$

$$n^2 + n = 6n + 3 - 3$$

$$n^2 + n = 6n$$

$$\begin{array}{r} -6n \quad -6n \\ \hline \end{array}$$

$$n^2 - 5n = 0$$

$$n(n-5) = 0$$

$$\left. \begin{array}{l} n=0 \\ \end{array} \right\} \begin{array}{r} n-5=0 \\ \quad +5 \quad +5 \\ \hline n=5 \end{array}$$