

4. A triangle is 3 more feet high than its base. What are the base and the height of the triangle if its area is 10 square feet? Draw and label an appropriate figure and write down an appropriate equation as part of your solution.

## 10.4 Exercises

1. Solve  $x^2 = 20$ .
2. Solve  $(x - 2)^2 = 12$ .
3. Solve  $x^2 - 4x = 6$ .
4. Solve  $3x^2 - 4x = 20$  using the quadratic formula.
5. Suppose you are trying to make a square garden with a walkway of uniform width. You only have enough garden materials for a 10 foot by 10 foot gardening patch. How wide should your walkway be so that the total area (walkway and garden) is 120 square feet?
6. Suppose you want to form a box with an open top by cutting out corners of a rectangular piece of cardboard which is 10 inches by 7 inches. How high will the box be if the area of the base of the box is 50 square inches?
7. Suppose that a right triangle has a hypotenuse of length 5 inches and one of the legs is 2 inches more than the other. What are the lengths of the legs?