FSAP
Pythagorean Theorem

1. Simplify the radicals.

   (a) $\sqrt{121}$

   (b) $\sqrt{25}$

   (c) $\sqrt{8}$

   (d) $\sqrt{18}$

   (e) $\sqrt{50}$

   (f) $\sqrt{48}$

2. What is the length of the hypotenuse of a right triangle with legs of length 5 and 6?
3. What is the length of the leg of a right triangle with the other leg having length 10 and a hypotenuse of 12?
4. Let $A(1, 2)$, $B(1, 5)$, and $C(4, 5)$. Find the distance from A to C.
5. Let $A(-2, 1)$, $B(-4, -8)$ and $C(0, 0)$. What are the lengths of the sides of ΔABC?
6. Let $A(2, -3)$ and $B(-1, 2)$. What is the distance from A to B?
7. On a clear day, assuming you are 6 feet tall, how many miles out to sea can you see? Assume the earth is a sphere with radius 3,958.8 miles.
8. What equation describes all the points (x, y) 3 units away from the origin?
9. $x^2 + y^2 = 25$ describes the points on a circle of radius 5 centered at the origin. Give the coordinates of 8 points that you know are on the circle. Is the point $(4, 2)$ inside the circle, on the circle, or outside the circle?
10. What equation describes all the point (x, y) 3 units away from the point (1,2)?