Name _____   Date_____

Right Triangles
Special Right Triangles: 45° – 45° – 90°
Independent Practice

1. At the local baseball diamond, the distance from home base to second base is 100 feet.
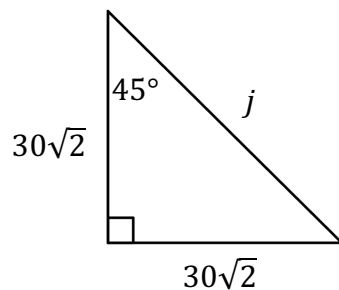
    Part A: Determine the distance from home base to first base.

    Part B: If Sammy hits a homerun, then what is the distance that she has to run around the bases?
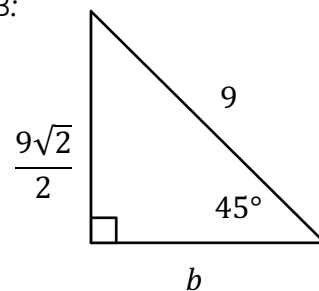
2. A decent-sized square plot of land in town is one acre (1 acre = 43560 sq.ft.). If Mr. Pearson wants to play football with his son Connor, then how far can they throw the football from corner to corner?

3. Use the Pythagorean Theorem or knowledge on special right triangles to find the missing variable in the following triangles.
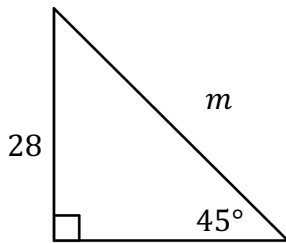
    Part A:

    45° j
    $30\sqrt{2}$

    $30\sqrt{2}$

    Part B:

    9
    $\dfrac{9\sqrt{2}}{2}$
    45°
    b

4. Use the Pythagorean Theorem or knowledge on special right triangles to find the missing variable in the following triangles.
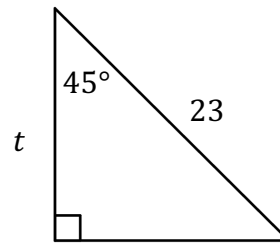
Part A:

m

28
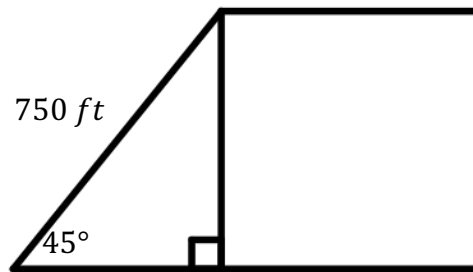
45°

Part B:

45°

23

t

5. Consider the image below of a pasture at McDonald's Farm.

750 ft

45°

Part A: If Ol' McDonald wants to fence in the square pasture and barbed fence costs $1.15/$ft$., then determine the cost to fence in the pasture.

Part B: If Ol' McDonald wants to cover the square pasture in fertilizer, then he needs to determine the area of the pasture. What is the area of the pasture to the nearest hundredth?