

Name: _____ Date: _____ Per: _____

11.4: Pythagorean Theorem (graded warm-up)

A baseball diamond has the shape of a square with side lengths of 90 feet. A catcher wants to get a player running from first to second base out, so the catcher must throw the ball to second base before the runner reaches second.

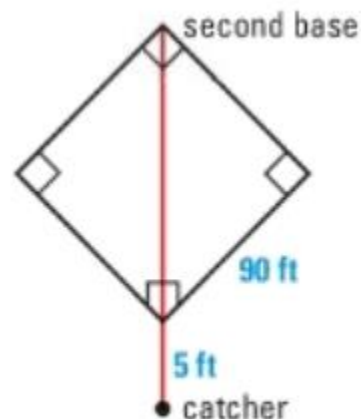
a) Find the distance from Home Plate to Second Base. Show or explain your work.

b) Find the total distance the catcher would need to throw the ball from his current position behind home plate. Show or explain how you got your answer.

c) If the runner is 30 feet away from second base when the catcher throws the ball, how long will it take the runner to reach second if he runs at a rate of 22 feet per second? (*Remember $d = rt$)

d) If the catcher throws the ball at a rate of 90 feet per second how long will it take the ball to reach second base?

e) Is the runner safe or out? Explain.



Not drawn to scale