

## Warm-up Problem

**Directions:** Please show all work, describe how you got the answer, and circle your final answer. If you use a calculator, say so, but also write out the calculations you did with the calculator.

**The Problem:** James has a robot that is using a laser range finder to determine the distance between the robot and obstacles in its environment. So that his robot didn't run into any obstacles, James did some testing and found that when the reading on the laser range finder was less than 20, that meant his robot was close to an obstacle and he needed to go in a new direction. As a result, he set 20 to be the threshold for determining whether an obstacle was close to the robot or not. For the following readings from the laser range finder, say whether James would classify the robot as being close to an object or not.

Laser Range Finder	(Threshold = 20)
25	
2	
27	
20	