

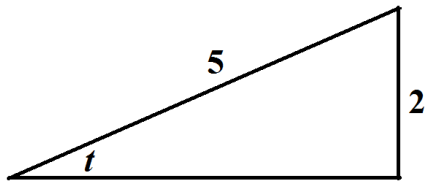
YOUR NAME: \_\_\_\_\_

George Voutsadakis

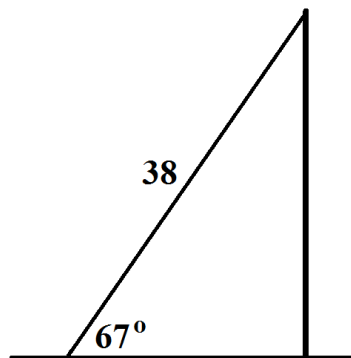
Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] A wheel of 10 feet in diameter is rotating at 10 revolutions per minute. Find the linear speed of a point on its outer rim. (Do not forget the units!)

2. [4 points] Given the triangle in the figure, find  $\sin t$ ,  $\cos t$ ,  $\tan t$  and  $\sec t$ .



3. [3 points] A guy wire is attached to an electricity pole as shown. If the length of the wire is 38 ft and the angle of elevation to the top of the pole is  $67^\circ$ , what is the height of the pole?



4. [3 points] Given the following figure, find  $\cos t$ .

