

Remember to always show all supporting work.

1. (2 points) (See 4.5 # 5) Determine the limit:

$$\lim_{x \rightarrow \pi/2} \frac{1 - \sin(x)}{1 + \cos(2x)}$$

2. (3 points) (See 4.5 # 11) Determine the limit:

$$\lim_{x \rightarrow \infty} (1 + 2x)^{1/(2 \ln(x))}$$

3. (5 points) (See 4.6 Plus #5) A rectangular storage container with an open top is to have a volume of 14 cubic meters. The length of its base is twice the width. Material for the base costs \$ 15 per square meter. Material for the sides costs \$ 6 per square meter. Find the cost of materials for the cheapest such container. (Round your final answer to the nearest cent.)