

**Math 206 - Extra Credit**  
May 6, 2015

Name key  
Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

1. (3 points) All purpose carpet costs \$27.50 per square yard. What is the cost of carpeting a room from wall to wall if the room's dimensions are 360 cm by 400 cm?

$$360 \times 400 = 144,000$$

Area is  $144,000 \text{ cm}^2$

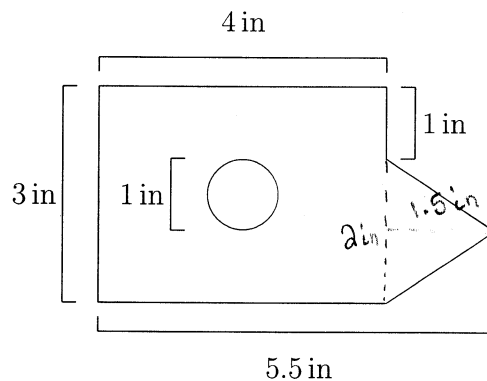
Convert to  $\text{yd}^2$

$$\frac{144,000 \text{ cm}^2}{1} \times \frac{1 \text{ in}^2}{2.54^2 \text{ cm}^2} \times \frac{1 \text{ yd}^2}{36^2 \text{ in}^2} \approx 17.222 \text{ yd}^2$$

\$473.61

Times \$27.50

2. (3 points) Find the area of the region outside of circle but inside of polygon. Round your answer to the nearest hundredth. (Assume that the angles that look like right angles actually are right angles.)



$$(3 \text{ in} \times 4 \text{ in}) + \frac{1}{2} (2 \text{ in} \times 1.5 \text{ in}) - \pi (0.5 \text{ in})^2$$

$$\approx 12.71 \text{ in}^2$$