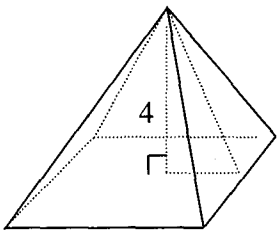
Math 142 Sp 2005 _____ NAME: Answers
Quiz # 7 15
Sections 13.3-13.4 Seat: _____
Partial credit is based on work shown!
9pts

1. Pictured below is a square pyramid with base edge of 6 feet and height of 4 feet.

a. What is **slant height** of this pyramid?



$3^2+4^2=\ell^2$
$9+16=\ell^2$
$25=\ell^2$
$\ell=\sqrt{25}=5$ ft

b. What is the **volume** of this pyramid?

$V=\frac{1}{3}$(area of square)(height)
$V=\frac{1}{3}Ah$
$V=\frac{1}{3}(6^2)(4)$
$V=48$ ft^3

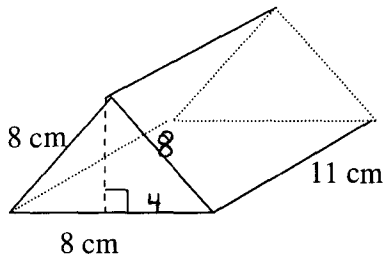
c. What is the total **surface area** of the pyramid?

$SA=\square+4\triangle s$ (Note: $4b=p$)
$SA=A+\frac{1}{2}p\ell$
$SA=6^2+\frac{1}{2}[4(6)(5)]$
$SA=36+60$
$SA=96$ ft^2

6 pts

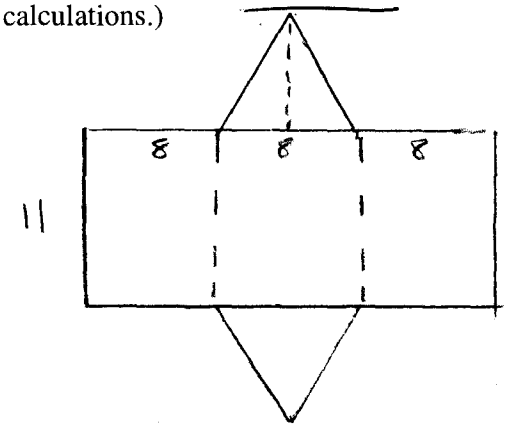
2. Pictured below is an equilateral triangular prism with measurements as indicated.

a. What is the **height** of the triangular base?



$4^2+h^2=8^2$
$h^2=64-16$
$h^2=48$
$h=\sqrt{48}\approx 6.93$

b. What is the total **surface area** of the prism? (Draw "flattened" or describe before doing calculations.)



$SA=2\triangle s+3$ rectangles
or $2\triangle s+1$ large rectangle
$SA=2A+ph$ {p = perimeter of $\triangle$, h = dist. bet. $\triangle$ bases}
$SA=2[\frac{1}{2}(8)(\sqrt{48})]+24(11)$
$SA\approx 55.43+264$
$SA\approx 319.43$