Geometry

Chapter 12 Review

Name KEY

Hour _____

Show all appropriate work and calculations -------> little work shown = little credit given

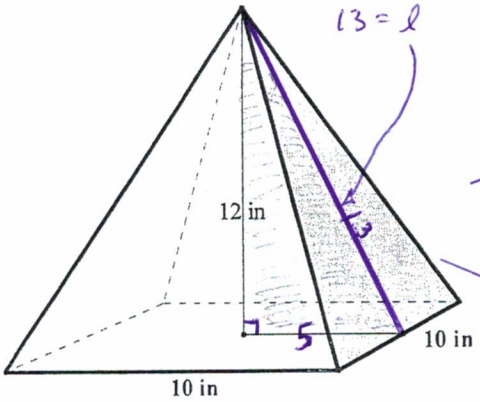
1) Find the surface area of this square pyramid.

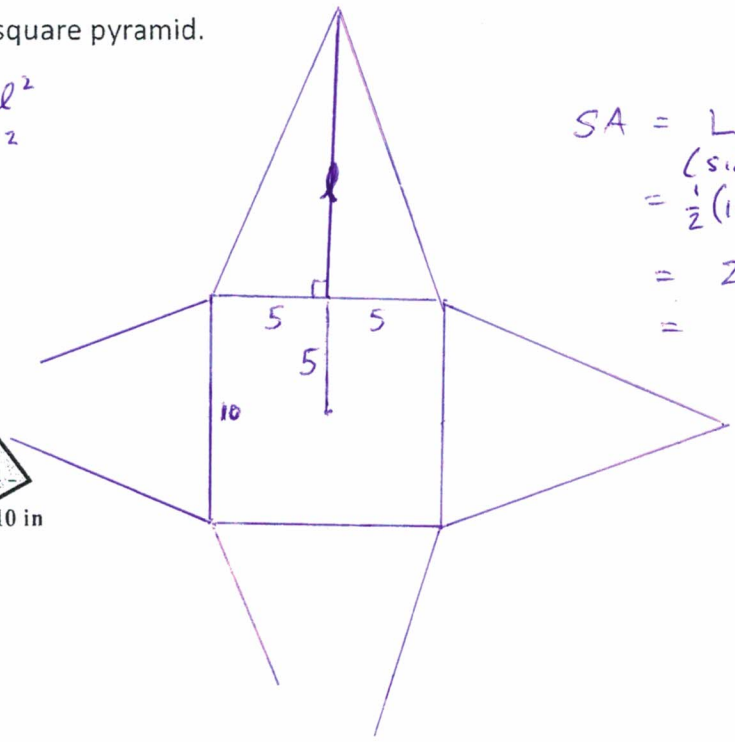
SA = 360 in²

$5^2 + 12^2 = \ell^2$

$169 = \ell^2$

$13 = \ell$





SA = LA + B

(sides) + (base)

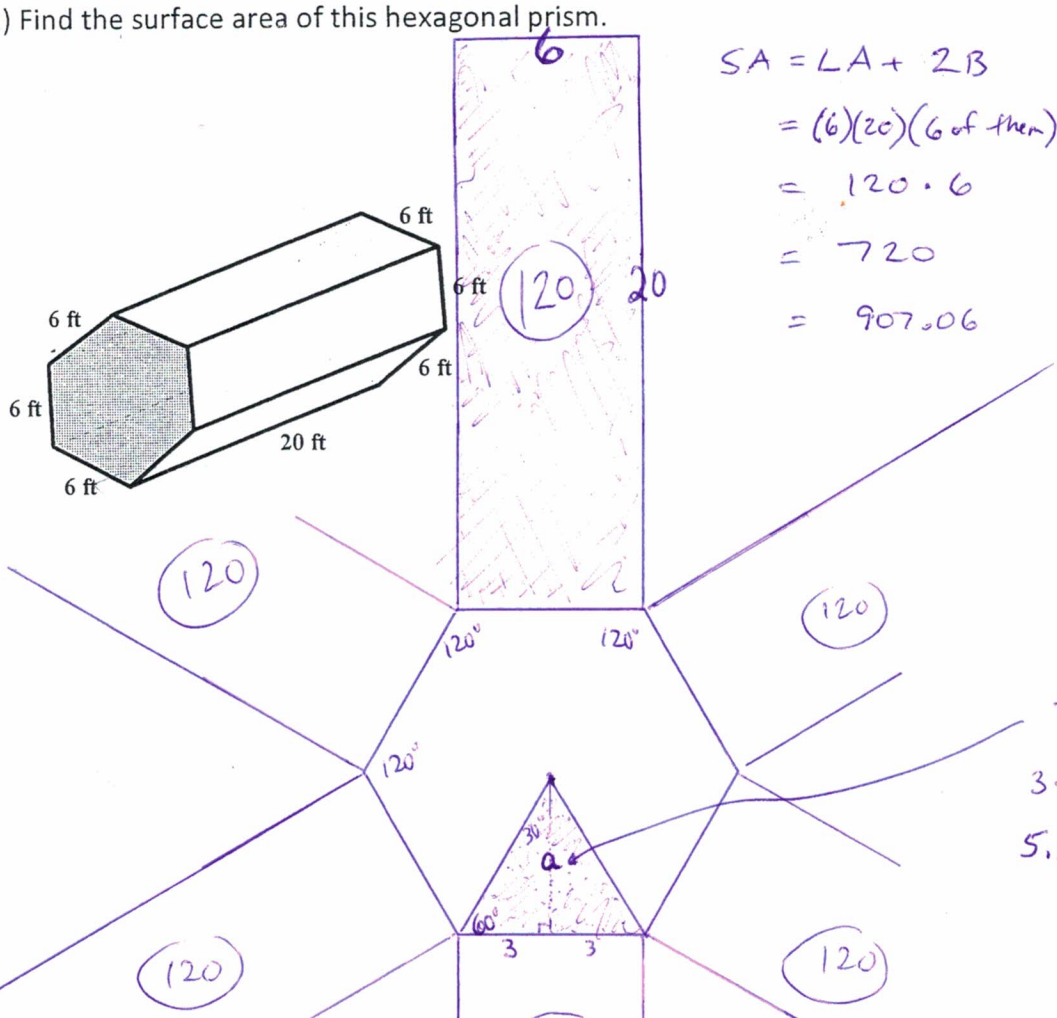
$= \frac{1}{2}(10)(13)(4) + (10)(10)$

$= 260 + 100$

$= 360 \text{ in}^2$

2) Find the surface area of this hexagonal prism.

SA = 907.06 ft²



SA = LA + 2B

$= (6)(20)(6 \text{ of them}) + 2\left[\frac{1}{2}(6)(a) \cdot 6\ \Delta\text{'s}\right]$

$= 120 \cdot 6 + 2\left[\frac{1}{2}(6)(5.196152)(6)\right]$

$= 720 + 187.0614872$

$= 907.06$

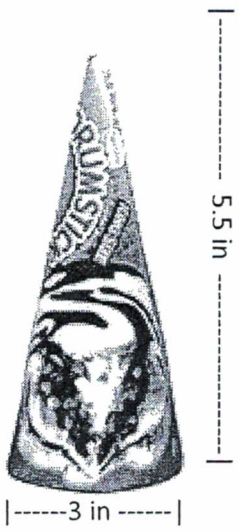
$\tan 60° = \frac{a}{3}$

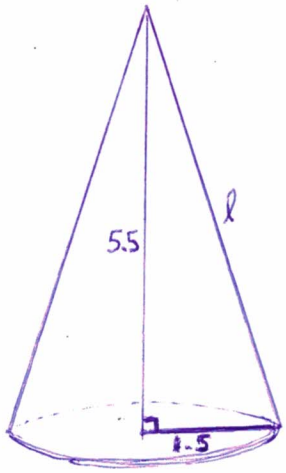
$3 \cdot \tan 60° = a$

$5.196152423 \approx a$

3) Find the surface area of this cone.

SA = 33.93 in^2





$(1.5)^2 + (5.5)^2 = \ell^2$

$SA = LA + B$

$= \pi r \ell + \pi r^2$

$= \pi(1.5)(5.7009) + \pi(1.5)^2$

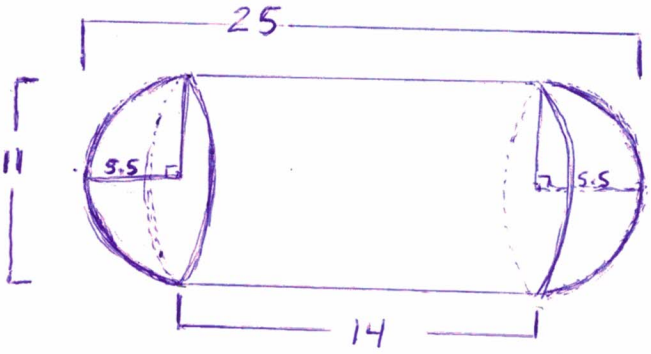
$= 26.8648 + 7.06858$

$= 33.93$

4) Find the surface area of this capsule if it's 11 mm x 25 mm.

(Yes, it's a camera you swallow ... used to check out your insides)

SA = 863.94 mm^2



SA = sphere + sides of cylinder

$= 4\pi r^2 + 2\pi r \cdot h$

$= 4\pi(5.5)^2 + 2\pi(5.5)(14)$

$= 380.1327 + 483.8053$

$= 863.938$