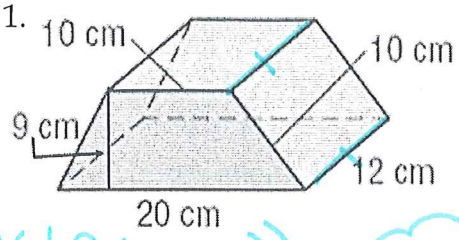
Key

Acc Geometry: Surface Area Practice
Interesting Figures

Directions: Find the surface area of the following figures, you may need to find missing parts before you find the SA. Round to the nearest thousandth if needed.

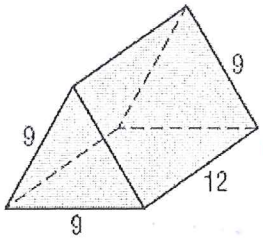
1.



$2(\frac{1}{2}9(20+10))$
$+20\times12$
$+2(10\times12)$
$+10\times12$

$SA = 870\ cm^2$

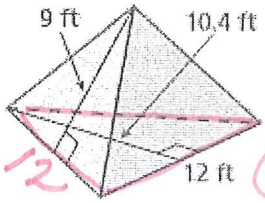
2.



$3(9\times12)$
$+2\frac{1}{2}9.9\sin(60)$

$SA \approx 394.148\ u^2$

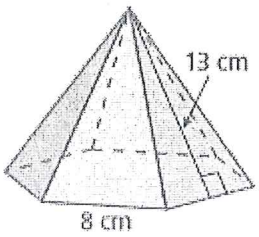
3.



$+\frac{1}{2}12\cdot10.4$
$3(\frac{1}{2}12\cdot9)$

$SA = 224.4\ ft^2$

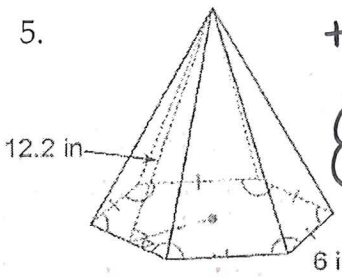
4.



$6\cdot\frac{1}{2}\cdot8\sin(60)$
$+6\cdot\frac{1}{2}\cdot8\cdot13$

$SA \approx 478.277\ cm^2$

5.

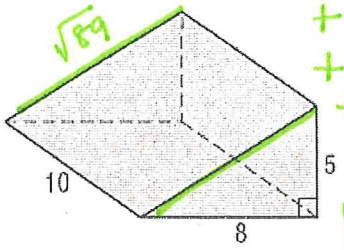


$6\frac{1}{2}6\cdot6\sin(60)$
$+6\cdot\frac{1}{2}\cdot6\cdot12.2$

$SA = 313.131\ in^2$

6.

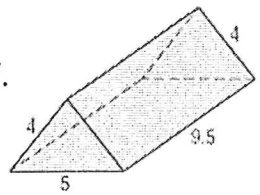
Pyth.



$2\frac{1}{2}8.5$
$+5\cdot10$
$+8\cdot10$
$+10\sqrt{89}$

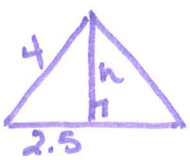
$SA \approx 264.340\ u^2$

7.



$2(4\times9.5)$
$+5\times9.5$
$+2(\frac{1}{2}5\times3.122)$

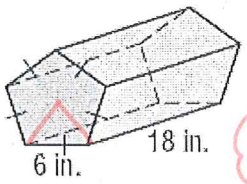
$SA = 139.110\ units^2$



$h^2+2.5^2=4^2$

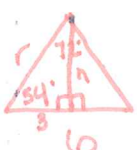
$h = 3.122$

8.



$2(5\frac{1}{2}5.104^2\sin(72))$
$+5(18\cdot6)$

$SA = 663.879\ in^2$

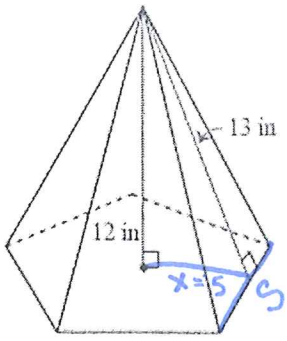


6

$\cos(54) = \frac{3}{r}$

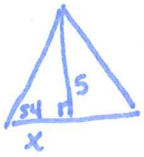
$r = 5.104$

9.



$SA = 5\frac{1}{2}(7.265)\cdot 13 + 5\frac{1}{2}(7.265)(5)$

$SA \approx 326.925 in^2$

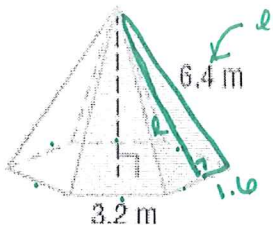


$\tan(54) = \frac{5}{x}$

$x = 3.632712641$

$5 = 7.265$

10.



$1.6^2 + l^2 = 6.4^2$

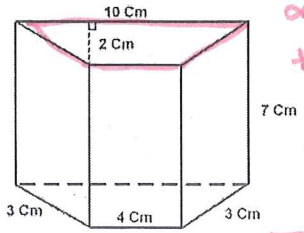
$l^2 = 38.4$

$l = 6.197$

$6\frac{1}{2}(3.2)^2 \sin(60) + 6\frac{1}{2}(3.2)(6.197)$

$SA \approx 86.096 m^2$

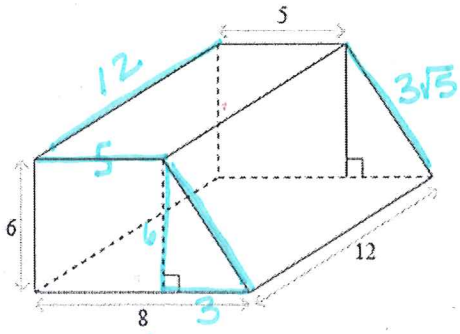
11.



$2(\frac{1}{2}2(4+10)) + 10\cdot 7 + 3\cdot 7 + 4\cdot 7 + 3\cdot 7$

$SA = 168 cm^2$

12.



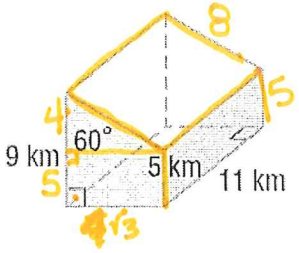
$2\frac{1}{2}6(5+8) + 8\cdot 12 + 6\cdot 12 + 5\cdot 12 + 12\cdot 3\sqrt{5}$

$SA = 306 + 36\sqrt{5} u^2$

$SA \approx 386.498 u^2$

Directions: Find the surface area of the following figures. Keep in terms in exact value.

13.



$5\cdot 11 + 8\cdot 11 + 9\cdot 11 \} 242$

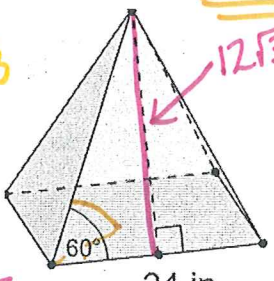
$4\sqrt{3}\cdot 11 \rightarrow 44\sqrt{3}$

$2\frac{1}{2}4\sqrt{3}(5+9) \rightarrow 56\sqrt{3}$

$SA = 242 + 100\sqrt{3} km^2$ ★

$SA \approx 415.205 km^2$

14.

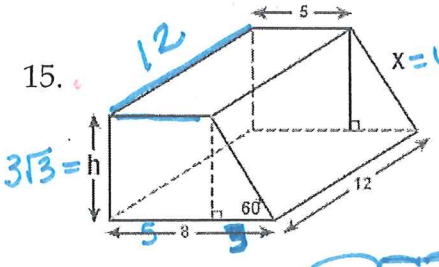


$24\times 24 + 4\frac{1}{2}24\cdot 12\sqrt{3}$

$SA = 576 + 576\sqrt{3}\ in^2$ ★

$SA \approx 1573.661 in^2$

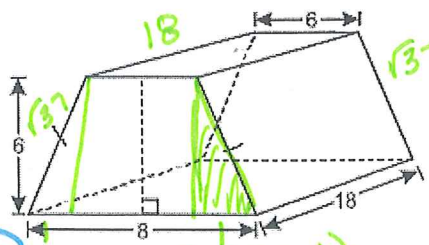
15.



$12\cdot 5 + 6\cdot 12 + 8\cdot 12 \rightarrow 36\sqrt{3} + 12\cdot 3\sqrt{3} \rightarrow 39\sqrt{3} + 2(\frac{1}{2}3\sqrt{3}(5+8))$

$SA = 228 + 75\sqrt{3} units^2$

16.



$2(\frac{1}{2}8(8+6)) + 18\cdot 6 + 2(18\sqrt{37}) + 8\cdot 18$

$SA = 336 + 36\sqrt{37} units^2$