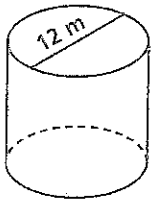
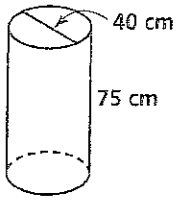
Name _____ Class _____ Date _____

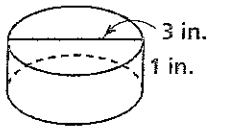
# Practice 10-5

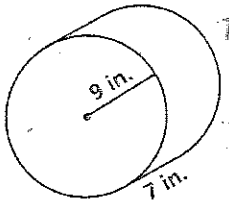
Volumes of Prisms and Cylinders

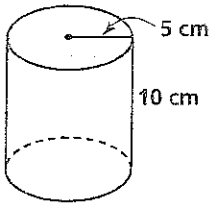
**Find the volume of each cylinder to the nearest tenth.**

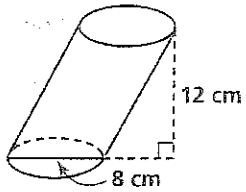
1. 


2. 

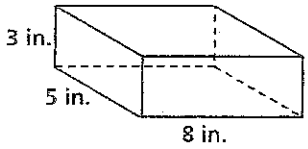

3. 

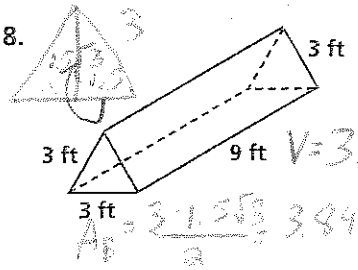

4. 

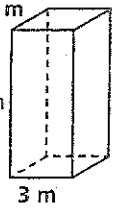

5. 

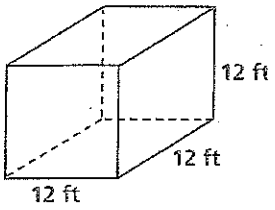

6. 

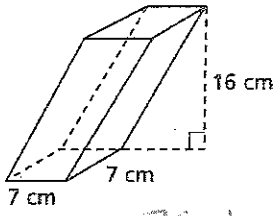

**Find the volume of each prism to the nearest whole number.**

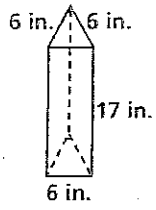
7. 


8. 

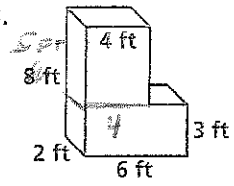

9. 

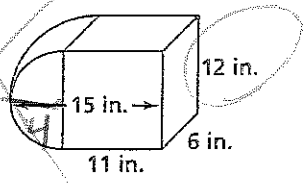

10. 

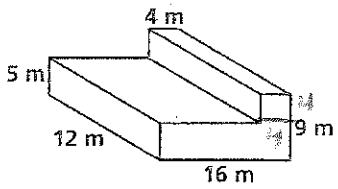

11. 


12. 


**Find the volume of each composite figure to the nearest whole number.**

13. 


14. 

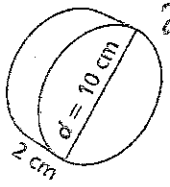

15. 

Name _____ Class _____ Date _____

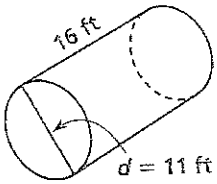
# Practice 10-3

Surface Areas of Prisms and Cylinders

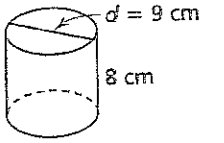
**Find the lateral area of each cylinder to the nearest tenth.**

1. 

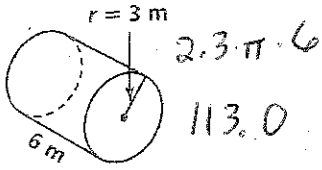
$2 \cdot 10 \cdot \pi$
$20\pi$
62.8

2. 

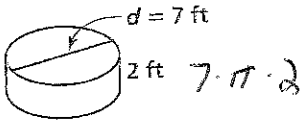
$11 \cdot \pi \cdot 16$
552.6

3. 

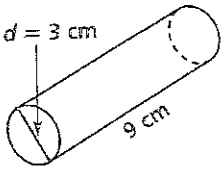
$9 \cdot \pi \cdot 8$
226.1

4. 

$2 \cdot 3 \cdot \pi \cdot 6$
113.0

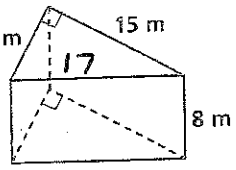
5. 

$7 \cdot \pi \cdot 2$
44.0

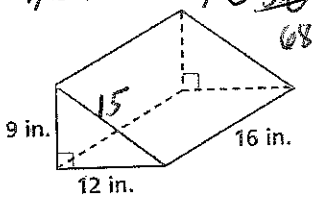
6. 

$3 \cdot \pi \cdot 9$
84.8

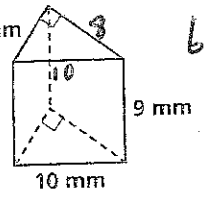
**Find (a) the lateral area and (b) the surface area of each prism. Round your answers to the nearest whole number.**

7. 

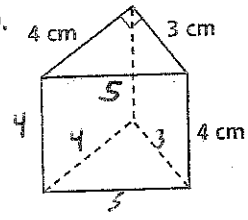
a) 320
b) ~~360~~ 440

8. 

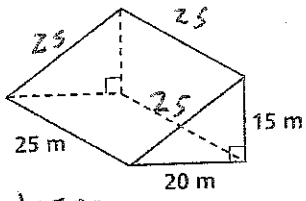
a) 576
b) ~~624~~ 684

9. 

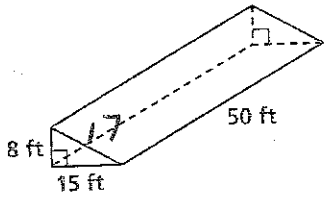
a) 216
b) 264

10. 

a) 48
b) 60

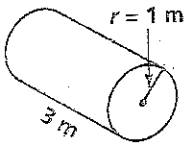
11. 

a) 1500
b) 1800

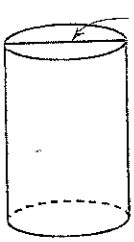
12. 

a) 2000
b) 2120

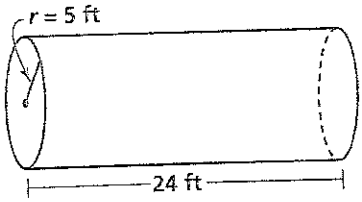
**Find the surface area of each cylinder in terms of $\pi$.**

13. 

$3 \cdot 2 \cdot \pi + 2\pi 1^2$
$6\pi + \pi$
$8\pi$

14. 

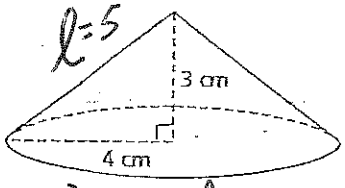
$7 \cdot \pi \cdot 10 + 3.5^2\pi \cdot 2$
$94.5\pi$

15. 

$10 \cdot \pi 24 + 25\pi \cdot 2$
$240\pi + 50\pi$
$290\pi$

# Surface Area & Volume of Pyramids and Cones

**Find the surface area of each cone in terms of $\pi$.**

4. 


$3^2+4^2=l^2$

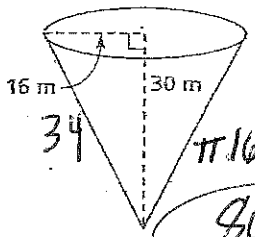
$\sqrt{9+16}=\sqrt{l^2}$

$5=l$

$l=5$

$\pi r^2+\pi r l$

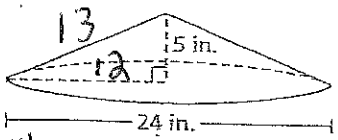
$\pi 16+\pi 4(5)=36\pi$ cm$^2$

5. 


34

$\pi 16^2+\pi(16)(34)$

$800\pi$

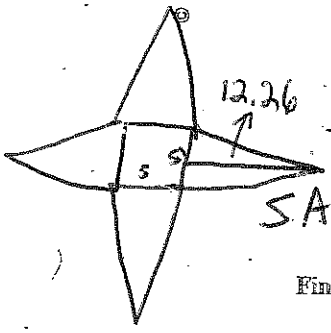
6. 

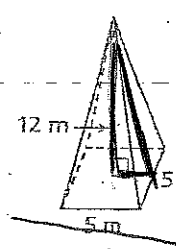

$\pi 12^2+\pi\,12\,(13)$

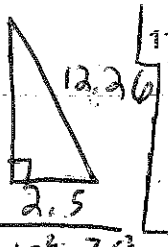
$300\pi$



**Find the surface area of each regular pyramid to the nearest tenth.**

10. 

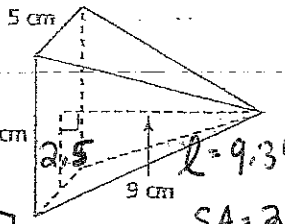




$12^2+2.5^2=$

$SA=25+4(5\cdot 12.26/2)=147.6$

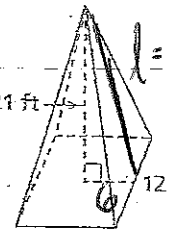
$A_{BASE}+Lat\ Area$

11. 


$l=9.34$

$SA=25+4\left(\frac{5\cdot 9.34}{2}\right)$

$=118.4$

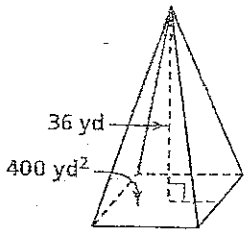
12. 


$l=21.84$

$SA=144+4\left(\frac{12\cdot 21.84}{2}\right)$

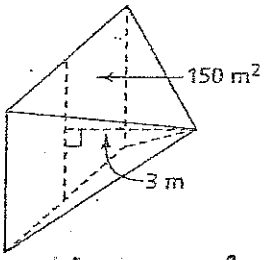
$=668.16$

**Find the volume of each pyramid.**

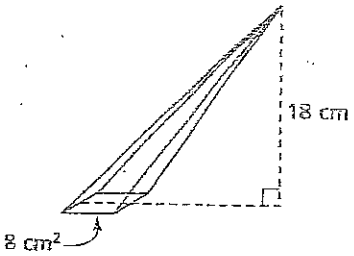
14. 


$V=\frac{400\cdot 36}{3}$

$=4800\ yd^3$

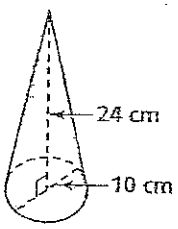
15. 


$V=150\ m^3$

16. 

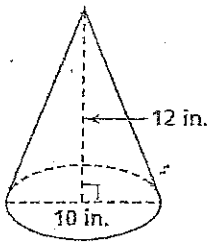

$V=\frac{8\cdot 18}{3}=48\ cm^3$

**Find the volume of each cone. Round your answers to the nearest tenth.**

17. 

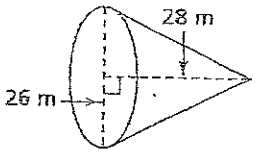

$\frac{25\pi\cdot 24}{3}=$

$200\pi\ cm^3$

18. 


$\frac{25\pi\cdot 12}{3}$

$100\pi\ cm^3$

19. 


$\frac{13^2\pi\cdot 28}{3}$

$1577.\overline{3}\ m^3$