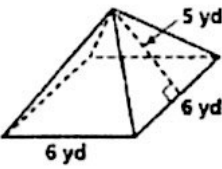


Find the lateral area and surface area of each figure. Leave your answer in terms of pi.

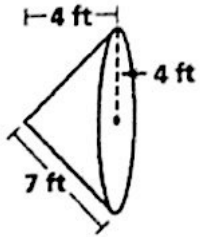
1. 

$$P = 6(4) = 24$$

$$B = \text{Area base} = 6(6) = 36$$

$$LA = \frac{1}{2}Pl = \frac{1}{2}(24)(5) = 12(5) = 60 \text{ yd}^2$$

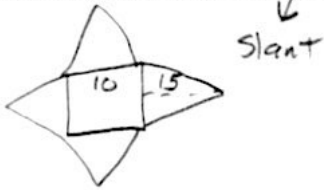
$$SA = LA + B = 60 + 36 = 96 \text{ yd}^2$$

2. 

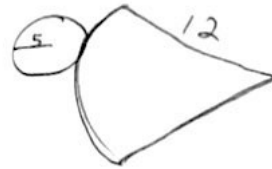
$$LA = \pi r l = \pi(4)7 = 28\pi \text{ ft}^2$$

$$SA = LA + B = 28\pi + \pi(4)^2 = 28\pi + 16\pi = 44\pi \text{ ft}^2 = SA$$

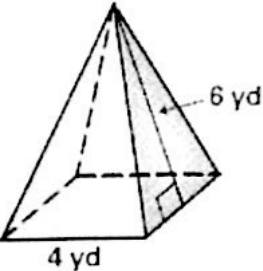
4. Draw a net for a square base pyramid with an edge of the base 10 and height 15.



5. Draw a net of a cone with radius 5 and slant height 12.



Find the lateral area and surface area of each. Use pi = 3.14 and round answers to the nearest tenth.

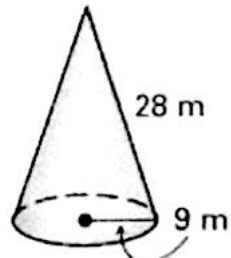
6. 

$$P = 4(4) = 16$$

$$B = 4(4) = 16$$

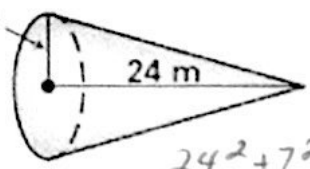
$$LA = \frac{1}{2}Pl = \frac{1}{2}(16)6 = 8(6) = 48$$

$$SA = LA + B = 48 + 16 = 64 \text{ yd}^2$$

7. 

$$LA = \pi r l = \pi(9)(28) = 252(3.14) = 791.28$$

$$SA = 791.3 + 81\pi = 791.3 + 254.3 = 1045.6 \text{ m}^2$$

8. 

$$24^2 + 7^2 = l^2$$

$$576 + 49 = l^2$$

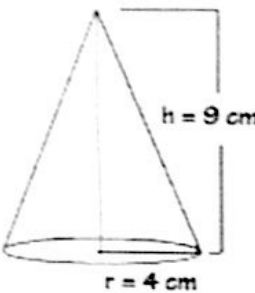
$$\sqrt{625} = \sqrt{l^2}$$

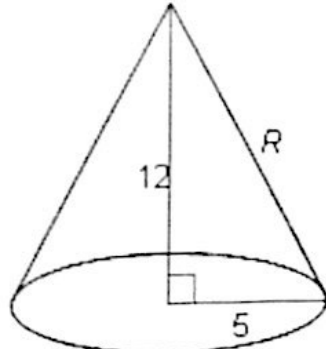
$$25 = l$$

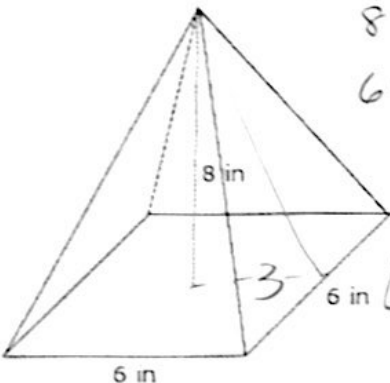
$$LA = \pi r l = \pi(24)(25) = 175(3.14) = 549.5 \text{ m}^2$$

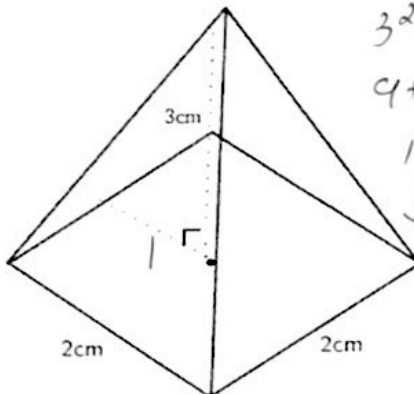
$$SA = 549.5 + \pi(24)^2 = 549.5 + 49(3.14) = 549.5 + 153.9 = 703.4 \text{ m}^2$$

Find the slant height.

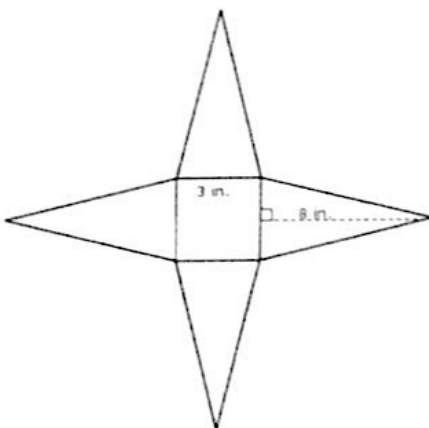
9.   $9^2 + 4^2 = l^2$   
 $81 + 16 = l^2$   
 $97 = l^2$   
 $9.8 = l$

10.   $12^2 + 5^2 = R^2$   
 $144 + 25 = R^2$   
 $169 = R^2$   
 $13 = R$

11.   $8^2 + 3^2 = l^2$   
 $64 + 9 = l^2$   
 $73 = l^2$   
 $\sqrt{73} = l$   
 $8.5 = l$

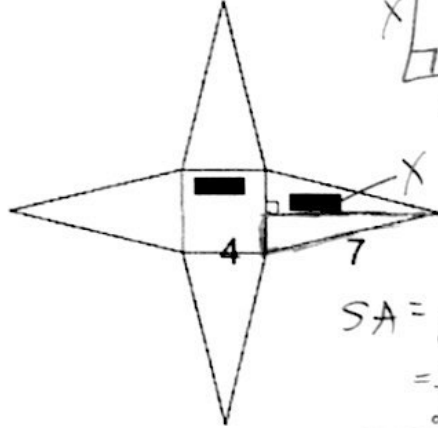
12.   $3^2 + 1^2 = l^2$   
 $9 + 1 = l^2$   
 $10 = l^2$   
 $\sqrt{10} = l$   
 $3.2 = l$

Find the surface area of the square base pyramid.

13. 

$$SA = \frac{1}{2}Pl + B$$

$$= \frac{1}{2}(12)8 + 9 = 57 \text{ in}^2$$

14.   $x^2 + 2^2 = 7^2$   
 $x^2 + 4 = 49$   
 $x^2 = 45$   
 $x = 6.7$

$$SA = \frac{1}{2}Pl + B$$

$$= \frac{1}{2}(16)(6.7) + 49$$

$$SA = 69.6$$