LESSON 12.2

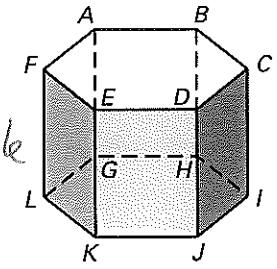
NAME KEY DATE _____

Practice B

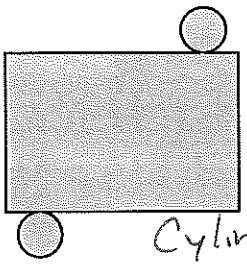
For use with pages 728–734

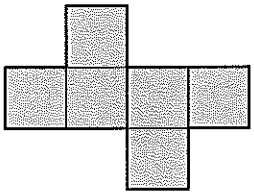
Use the diagram at the right.

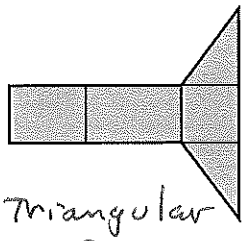
1. Give the mathematical name of the solid. Hexagonal Prism
2. What kind of figure is each base? Hexagon
3. What kind of figure is each lateral face? Rectangle
4. How many lateral faces does the solid have? 6
5. Name three lateral edges. $\overline{FL}$, $\overline{EK}$, $\overline{DJ}$



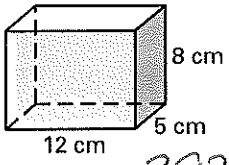
Name the solid that can be folded from the net.

6.  Cylinder

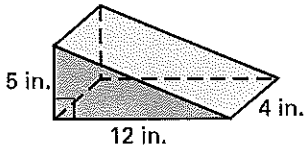
7.  Cube (Rectangular Prism)

8.  Triangular Prism

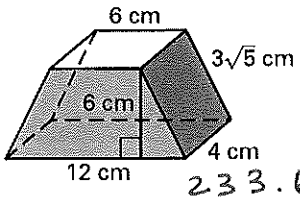
Find the surface area of the right prism. Round your result to two decimal places.

9. 

392 cm²

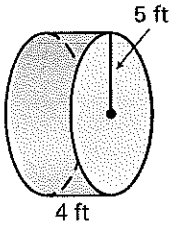
10. 

180 in²

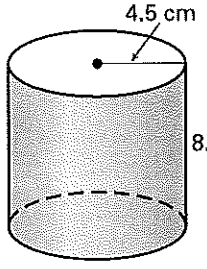
11. 

233.67 cm²

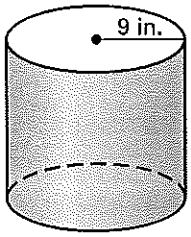
Find the surface area of the right cylinder. Round your result to two decimal places.

12. 

282.74 ft²

13. 

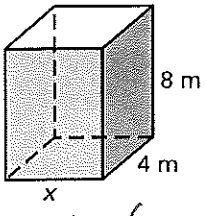
359.08 cm²

14. 

1470.27 cm²

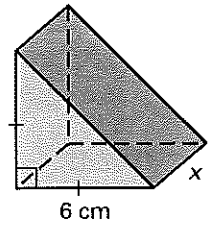
Solve for the variable given the surface area *S* of the right prism or right cylinder. Round the result to one decimal place.

15. $S = 208$ m²



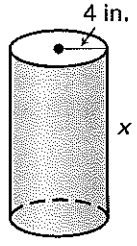
x = 6 m

16. $S = 97.5$ cm²



x = 3 cm

17. $S = 452.4$ in.²



x = 14 in.

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9) $SA = 2B + Ph$

$= 2(60) + 34(8)$

$= 392$

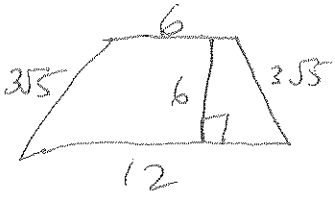
10)

$= 2\left(\frac{1}{2}(12 \times 5)\right) + 30(4)$

$= 60 + 120$

$= 180\ m^2$

11)



$= 2\left(\frac{1}{2}(6)(18)\right) + (31.42)4$

$= 108 + (18 + 6\sqrt{35})\ 4$

125.67

$= 233.67$

12) $= 2\pi(5)^2 + 2\pi(5)4$

$= 50\pi + 40\pi$

$= 90\pi = 282.74$

13) $2\pi(4.5)^2 + 2\pi(4.5)(8.2)$

$= 40.5\pi + 73.8$

$= 114.3\pi$

$= 359.08$

14) $2\pi(9)^2 + 2\pi(9)(17)$

$162\pi + 306\pi$

468π

1470.27

15) $208 = 2(4x) + (2x+8)8$

$208 = 8x + 16x + 64$

$144 = 24x$

$6 = x$

16) $97.5 = 2\left(\frac{1}{2}(6)(6)\right) + 20.5x$

$97.5 = 36 + 20.5x$

$61.5 = 20.5x$

$3 = x$

17) $452.4 = 2\pi(4)^2 + 2\pi(4)x$

$452.4 = 32\pi + 8\pi x$

$351.9 = 8\pi x$

$14 = x$