

## Answers for Lesson 8-5, pp. 377–378 Exercises

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1. Lateral area is less than surface area because it does not include the area of the square base.
2.  $15.55 \text{ m}^2$
3. 14
4. L.A. =  $(4\pi)(14) = 56\pi$
5. S.A. =  $56\pi + 16\pi = 72\pi$
6.  $1,680 \text{ cm}^2$
7.  $3.4 \text{ yd}^2$
8.  $231 \text{ in.}^2$
9. L.A. =  $3,000 \text{ in.}^2$ ;  
S.A. =  $3,900 \text{ in.}^2$
10. L.A. =  $462 \text{ m}^2$ ;  
S.A. =  $658 \text{ m}^2$
11. L.A. =  $24 \text{ cm}^2$ ;  
S.A. =  $33 \text{ cm}^2$
12.  $188 \text{ ft}^2$
13.  $104 \text{ m}^2$
14.  $121 \text{ in.}^2$
15. \$50
16. The student used 8 for the radius, rather than 4; the correct solution is about  $88 \text{ cm}^2$ .
17. a. 856 ft  
b.  $248,240 \text{ ft}^2$
18.  $452 \text{ yd}^2$
19.  $628 \text{ cm}^2$
20.  $24 \text{ ft}^2$
21. yes, because it is equivalent to  $\pi r^2 + \pi r\ell$
22. Yes, because  $\pi r\ell = \pi(2r)\left(\frac{\ell}{2}\right)$
23. Answers may vary. Sample:  $270 \text{ m}^2$ ;  $268 \text{ m}^2$
24. The pyramid; since the base areas are the same,  $\pi r^2 = b^2$  or  $b = r\sqrt{\pi}$ . The lateral area of the cone is  $\pi r\ell$ , and the lateral area of the pyramid is  $2b\ell$  or  $2(r\sqrt{\pi})\ell$ . Therefore,  $\pi r\ell < 2\sqrt{\pi}r\ell$ , because  $\pi < 2\sqrt{\pi}$ .
25. D
26. H

**Answers for Lesson 8-5, pp. 377–378 Exercises (cont.)**

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**27.**

