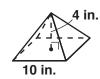
## Answers for Lesson 11-3, pp. 620-622 Exercises

- 1.  $408 \text{ in.}^2$
- 3.  $179 \text{ in.}^2$
- 5.  $354 \text{ cm}^2$
- **7**. 834,308 ft<sup>2</sup>
- **9.**  $33\pi$  ft<sup>2</sup>
- **11**. 1044 in.<sup>2</sup>
- **13.** 47 cm<sup>2</sup>

- **2.**  $138 \text{ m}^2$
- **4.**  $204 \text{ m}^2$
- **6.**  $51 \text{ m}^2$
- **8.**  $144\pi \text{ cm}^2$
- **10.**  $119\pi \text{ cm}^2$
- **12.** 31 m<sup>2</sup>
- **14.** Answers may vary. Sample: PT < PR, since PR is a hyp. in  $\triangle PTR$ .  $m \angle PCR = m \angle PBR$  (since  $\triangle PCB$  is isosc.) and  $m \angle PBR < m \angle PRC$ , so  $m \angle PCR < m \angle PRC$ . Therefore, PR < PC.
- **15.** Altitude; altitude; the altitude is shorter because it is one leg of a right  $\triangle$  with the lateral edge as the hyp., and is steeper because it rises the same vert. distance over less horiz. distance.
- **16.** 228.1 in.<sup>2</sup>



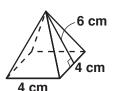
**17.** 8 ft

**18.** 478 cm<sup>2</sup>

**19.**  $62 \text{ cm}^2$ 

**20.** 28 in.<sup>2</sup>

- **21.** 4 in.
- **22.** Answers may vary. Sample:



 $64 \text{ cm}^2$ 

**23.** 1580.6 ft<sup>2</sup>

## Answers for Lesson 11-3, pp. 620-622 Exercises

- **24.** Cylinder: the lateral area of the 2 cones is  $30\pi$  in.<sup>2</sup> and the lateral area of the cylinder is  $48\pi$  in.<sup>2</sup>.
- **25.**  $(\ell + r)r\pi = \pi r\ell + \pi r^2$ , which is the lateral area plus the circular base area. This formula may require fewer keystrokes and doesn't use exponents.
- **26.** a.  $\ell = \frac{\text{S.A.}}{\pi r} r$

**b.** 
$$r = \frac{-\pi\ell + \sqrt{\pi^2\ell^2 + 4\pi(S.A.)}}{2\pi}$$

- **27.** A
- **28.** 58 m<sup>2</sup>
- **29.** 471 ft<sup>2</sup>
- **30.** 45 m<sup>2</sup>
- **31.** L.A. = 30 in.<sup>2</sup>,  $h \approx 4.8$  in.,  $\ell = 5$  in.
- **32.**  $s = 12 \text{ m}, \text{L.A.} = 240 \text{ m}^2, \text{S.A.} = 384 \text{ m}^2$
- **33.** s = 2 ft,  $h \approx 4.9$  ft, S.A. = 24 ft<sup>2</sup>
- **34.**  $s = 8 \text{ cm}, \ell \approx 7.4 \text{ cm}, h \approx 6.2 \text{ cm}$
- **35.** 21.2 cm

- **36.** about 613.5 cm<sup>2</sup>
- **37.** cone with r = 4 and h = 3;  $36\pi$
- **38.** cone with r = 3 and h = 4;  $24\pi$
- **39.** cylinder with cone-shaped hole;  $60\pi$
- **40.** cylinder with cone-shaped hole;  $48\pi$
- **41.**  $100\sqrt{5}$  cm<sup>2</sup>;  $100\sqrt{5} + 100$  cm<sup>2</sup>
- **42.**  $25\pi\sqrt{5}$  cm<sup>2</sup>;  $25\pi\sqrt{5} + 25\pi$  cm<sup>2</sup>
- **43.** 129.6