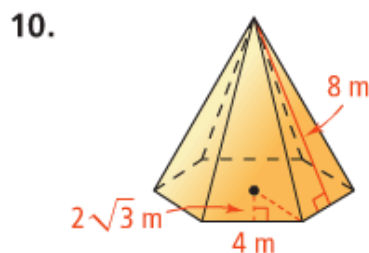


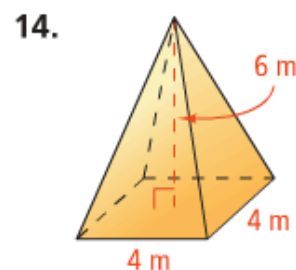
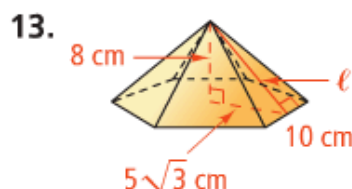
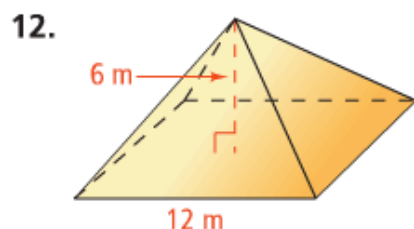
Find the surface area of each pyramid to the nearest whole number.

← See Problem 1.



Find the lateral area of each pyramid to the nearest whole number.

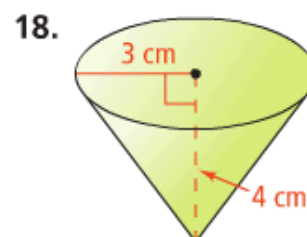
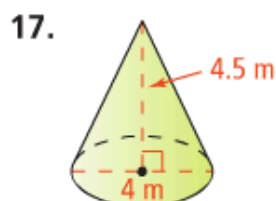
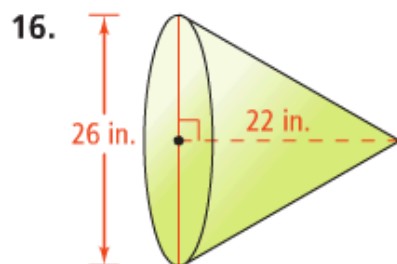
← See Problem 2.



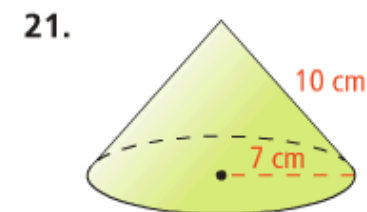
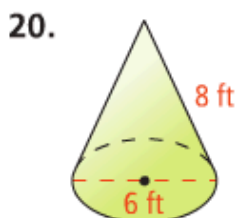
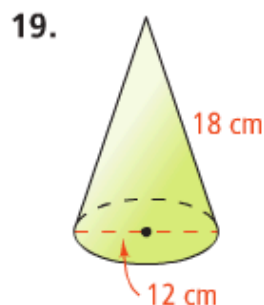
15. **Social Studies** The original height of the Pyramid of Khafre, located next to the Great Pyramid in Egypt, was about 471 ft. Each side of its square base was about 708 ft. What is the lateral area, to the nearest square foot, of a pyramid with those dimensions?

Find the lateral area of each cone to the nearest whole number.

← See Problems 3 and 4.



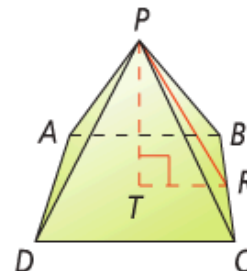
Find the surface area of each cone in terms of π .



22. **Reasoning** Suppose you could climb to the top of the Great Pyramid. Which route would be shorter, a route along a lateral edge or a route along the slant height of a side? Which of these routes is steeper? Explain your answers.

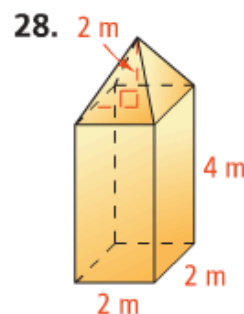
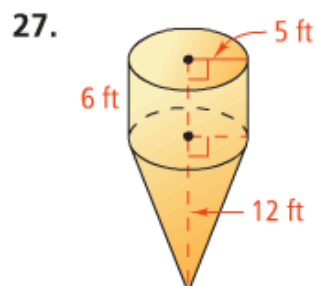
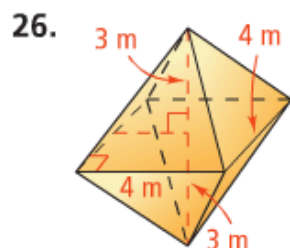
23. The lateral area of a cone is 4.8π in.². The radius is 1.2 in. Find the slant height.

24. **Writing** Explain why the altitude \overline{PT} in the pyramid at the right must be shorter than all of the lateral edges \overline{PA} , \overline{PB} , \overline{PC} , and \overline{PD} .



25. **Think About a Plan** The lateral area of a pyramid with a square base is 240 ft^2 . Its base edges are 12 ft long. Find the height of the pyramid.
- What additional information do you know about the pyramid based on the given information?
 - How can a diagram help you identify what you need to find?

Find the surface area to the nearest whole number.



29. **Open-Ended** Draw a square pyramid with a lateral area of 48 cm^2 . Label its dimensions. Then find its surface area.
30. **Architecture** The roof of a tower in a castle is shaped like a cone. The height of the roof is 30 ft and the radius of the base is 15 ft. What is the lateral area of the roof? Round your answer to the nearest tenth.
31. **Reasoning** The figure at the right shows two glass cones inside a cylinder. Which has a greater surface area, the two cones or the cylinder? Explain.
32. **Writing** You can use the formula $S.A. = (\ell + r)r\pi$ to find the surface area of a cone. Explain why this formula works. Also, explain why you may prefer to use this formula when finding surface area with a calculator.
33. Find a formula for each of the following.
- the slant height of a cone in terms of the surface area and radius
 - the radius of a cone in terms of the surface area and slant height

