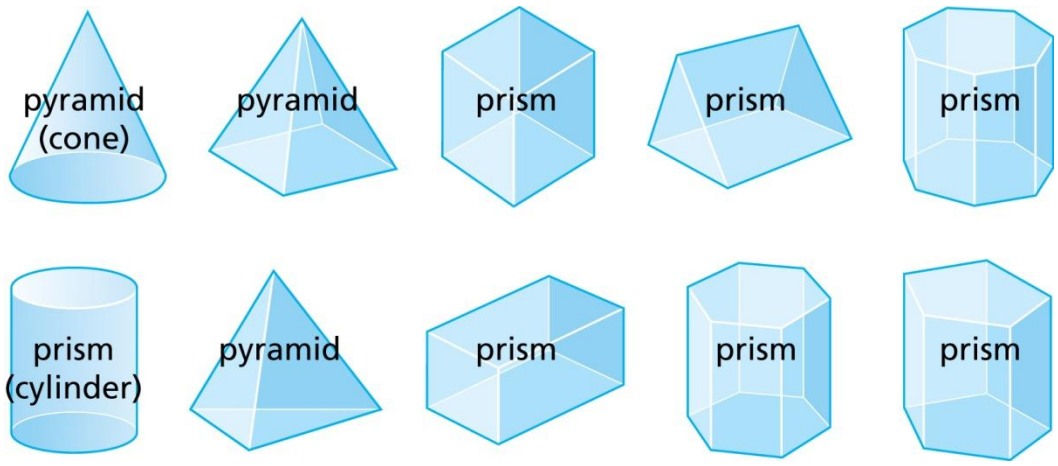
Lesson 4: Surface Area of 3-D Objects

Are You Ready? Possible Answers

1. A prism is a 3-D object with two bases joined by lateral rectangular faces. A pyramid, by contrast, is a 3-D object with one base, whose triangular faces meet at a point called the apex. Special cases of these 3-D objects are the cylinder (e.g., circular prism) and the cone (e.g., circular pyramid).

2. 

3. Area is an amount of space enclosed by a closed, 2-D figure.

4. a. $A = \ell w$, where $\ell =$ length and $w =$ width

   b. $A = \frac{1}{2}bh$, where $b =$ the base length and $h =$ height

   c. $A = \pi r^2$, where $r =$ length of radius

5. a. $A = \ell w$

   $A = 12.3 \text{ cm} \times 5.2 \text{ cm}$

   $A = 64 \text{ cm}^2$

   b. $A = \frac{1}{2}bh$

   $A = \frac{1}{2}\ 9.6 \text{ cm}\quad 6.4 \text{ cm}$

   $A = 31 \text{ cm}^2$

   c. $A = \pi r^2$

   $A = \pi\ \ 22 \text{ cm}^{\ 2}$

   $A = 1521 \text{ cm}^2$