

**SECTION**  
**10B**

**Ready to Go On? Skills Intervention**

**10-10 Surface Area**

The **surface area** of a solid figure is the sum of the areas of its surfaces. A **net** is the pattern made when the surface of a solid is laid out flat showing each face of the figure.

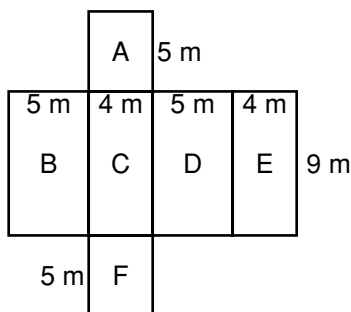
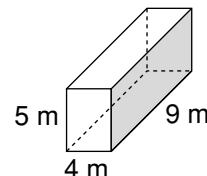
**Vocabulary**

surface area  
net

**Finding the Surface Area of a Prism**

Find the surface area  $S$  of the prism.

Draw a net to help you see each face of the prism.  
Use the formula  $A = \ell w$  to find the area of each face.



**A:**  $A = 4 \times 5 = 20$

**B:**  $A = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

**C:**  $A = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

**D:**  $A = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

**E:**  $A = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

**F:**  $A = \underline{\quad} \times \underline{\quad} = \underline{\quad}$

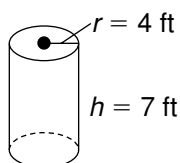
Add the areas of each face.

$20 + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

The surface area of the prism is \_\_\_\_\_.

**Finding the Surface Area of a Cylinder**

Find the surface area  $S$  of the cylinder.



$S =$  area of the lateral surface  $+ 2 \times$  (area of each base)

What is the shape of the base? \_\_\_\_\_

What is the formula for its area? \_\_\_\_\_

$S = h \times (2\pi r) + 2 \times (\pi r^2)$

$S \approx \underline{\quad} (2 \times \pi \times \underline{\quad}) + 2 \times (\pi \times \underline{\quad})$

$S \approx \underline{\quad} \times \underline{\quad} \pi + 2 \times \underline{\quad} \pi$

$S \approx \underline{\quad} \times \underline{\quad} (3.14) + 2 \times \underline{\quad} (3.14)$

$S \approx \underline{\quad} \times \underline{\quad} + 2 \times \underline{\quad}$

$S \approx \underline{\quad} + \underline{\quad}$

$S \approx \underline{\quad}$

Complete the surface area formula.

What value will you use for  $h$ ? For  $r$ ?

Use the order of operations and solve for  $S$ .

Use 3.14 as an estimate for  $\pi$ .

The surface area of the cylinder is about \_\_\_\_\_.