## Practice B
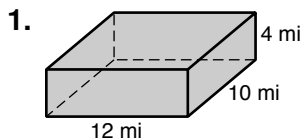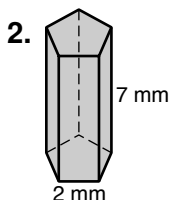**10-4** *Surface Area of Prisms and Cylinders*

**Find the lateral area and surface area of each right prism. Round to the nearest tenth if necessary.**
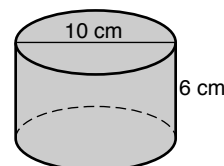
**1.**

4 mi
10 mi
12 mi

the rectangular prism

_____

**2.**

7 mm
2 mm

the regular pentagonal prism

_____

**3.** a cube with edge length 20 inches _____

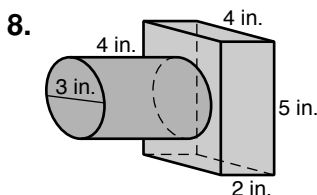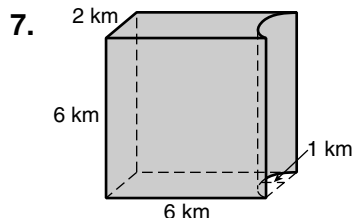**Find the lateral area and surface area of each right cylinder. Give your answers in terms of π.**

10 cm
6 cm

**4.** _____

**5.** a cylinder with base area $169\pi$ ft$^2$ and a height twice the radius

**6.** a cylinder with base circumference $8\pi$ m and a height one-fourth the radius

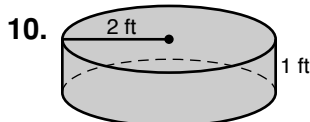**Find the surface area of each composite figure. Round to the nearest tenth.**

**7.**

2 km
6 km
6 km
1 km

**8.**

4 in.
4 in.
3 in.
5 in.
2 in.

**Describe the effect of each change on the surface area of the given figure.**

**9.**

1 cm
1 cm
10 cm
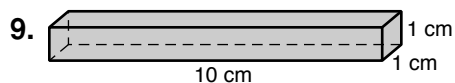
The dimensions are multiplied by 12.

_____

**10.**

2 ft
1 ft

The dimensions are divided by 4.

_____

Toby has eight cubes with edge length 1 inch. He can stack the cubes into three different rectangular prisms: 2-by-2-by-2, 8-by-1-by-1, and 2-by-4-by-1. Each prism has a volume of 8 cubic inches.

**11.** Tell which prism has the smallest surface-area-to-volume ratio. _____

**12.** Tell which prism has the greatest surface-area-to-volume ratio. _____