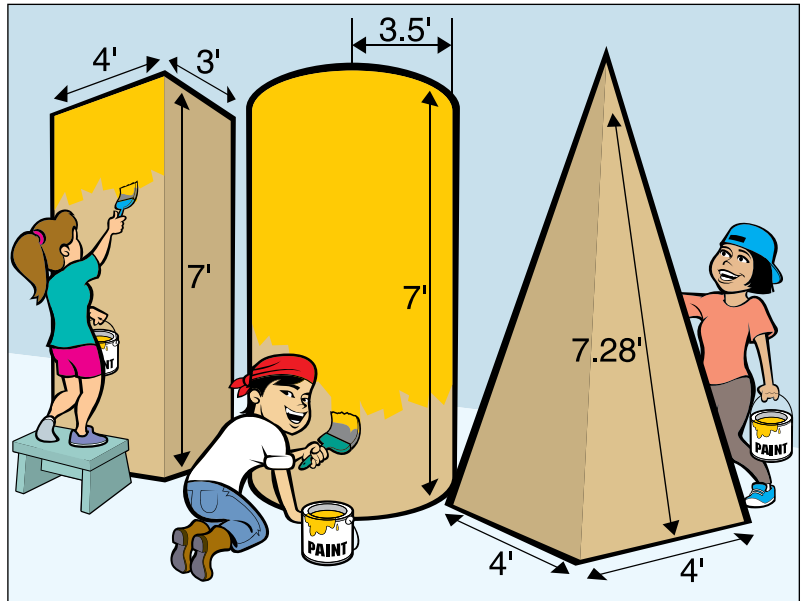


# That Should Cover It!

The Geometrics love shapes. For the upcoming concert, the three main players each want to emerge from human-size shapes of a rectangular prism, a cylinder, and a square pyramid. While they already have these props built, the band asks the Geometrics Stage Crew to paint over them completely (even the bottom of each object). The stage crew knows that 1 gallon of paint covers 350 square feet. To buy the right amount of paint, **the stage crew has to calculate the surface area of each shape.**



- 1** The dimensions of the rectangular prism for the lead guitarist are height = 7 feet, width = 4 feet, and length = 3 feet.

Surface Area =

- 3** The dimensions of the square pyramid for the bass player are base length = 4, base width = 4, and a slant height of 7.28 feet. Solve with a decimal, then also round to the nearest half foot.

Surface Area =

- 2** The dimensions of the cylinder for the drummer are radius = 3.5 feet and height = 7 feet. Solve with a decimal, then also round to the nearest half foot.

Surface Area =

- 4** Can the stage crew paint the surface area of all three shapes with just one can of paint?

## BONUS:

The drummer says that he'd also like to have a backup cone with the same height and radius as the cylinder and a slant of 7.8 feet.

The stage crew needs a new formula to figure out the surface area of a cone:

$$SA = (\pi \cdot r^2) + (\pi \cdot r \cdot \text{slant}).$$

a. What is the surface area? Express as a decimal and then round to the nearest foot.

b. If one gallon of paint covers 350 square feet, about how much of a gallon is needed to paint the cone?

