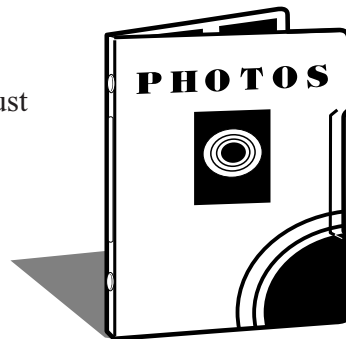


10-2**Real-Life Career Activity*****Photo Developer***

Photo developers are responsible for processing photographic film. They print the photographs we take. Although there are computerized machines that develop film, the photo developer must monitor the machines to ensure that they are working correctly.

Developers can also make extra copies of photographs. The copies can be the same size as the original photo or they can be enlarged. To keep the length and width of an enlargement proportional to the original photo, the measurements for the enlargement must be computed mathematically.



Suppose a photo developer wants to enlarge a photo that is 4 inches long and 6 inches wide. The enlarged photo must have the same proportions as the original, but be 12 inches long. What size will the enlargement be?

$$\frac{4}{6} = \frac{12}{w} \quad \text{Write a proportion.}$$

$$4 \times w = 6 \times 12 \quad \text{Cross products}$$

$$4w = 72 \quad \text{Multiply.}$$

$$\frac{4w}{4} = \frac{72}{4} \quad \text{Divide.}$$

$$w = 18$$

The enlargement will be 12 inches long and 18 inches wide.

Solve.

1. A photo developer wants to enlarge a photo that is 4 inches long and 6 inches wide. The enlarged photo must have the same proportions as the original, but be 20 inches long. What size will the enlargement be?
2. A photo developer wants to enlarge a photo that is 3 inches long and 5 inches wide. The enlarged photo must have the same proportions as the original, but will be 12 inches long. What size will the enlargement be?
3. A photo developer has an enlargement that is 16 inches long and 20 inches wide. The original has the same proportions as the enlargement, but is only 4 inches long. How wide is the original?