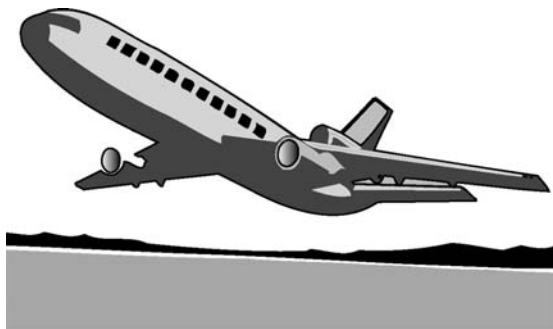


**1-7****Real-Life Career Activity*****Airline Ticket Agent***

Airline ticket agents make sure that passengers are on the correct flight. If a flight is canceled or delayed, they help passengers find different flights that will get them to their destination. Ticket agents also check that each passenger's baggage is the right size and weight to be loaded onto the airplane. Bags that are too large or too heavy cannot be taken on the plane. A plane that is too heavy will not be able to fly correctly. Ticket agents for one airline use the formula below to check that baggage is the correct size.



$$H + W + L = 62 \text{ inches}$$

In this formula,  $H$  is the height of the bag,  $W$  is the width of the bag, and  $L$  is the length of the bag.

Suppose a passenger has a bag 26 inches high and 16 inches wide. What length  $L$  can the bag be?

$$\begin{array}{ll} H + W + L = 62 & \text{The sum is 62.} \\ 26 + 16 + L = 62 & \text{Replace } H \text{ with 26 and } W \text{ with 16.} \\ 42 + L = 62 & \text{Add.} \\ L = 20 & \text{Solve for } L. \end{array}$$

The bag can be 20 inches long.

***Solve.***

1. A passenger has a bag 5 inches high and 10 inches wide. What length can the bag be?
2. A passenger has a bag 35 inches long and 20 inches wide. What height can the bag be?
3. A passenger has a bag 50 inches long and 20 inches wide. Will the ticket agent send the bag to be loaded on the plane?