

You are going to invest \$25,000, part at 14% and part at 16%. What is the most that can be invested at 14% in order to make at least \$3,600 interest per year?

Solution:

x - the maximum amount that can be invested at 14 percent.

Equation for income in a year:

$$\text{income}_{14\%} + \text{income}_{16\%} = \text{total income}$$

$$x \cdot 0.14 + (25000 - x) \cdot 0.16 = 3600$$

$$400 - 0.02x = 0$$

$$x = 20000$$

Answer: the maximum amount that can be invested at 14 percent is \$20,000.