

So $100x + 500(0.10) = 75 \Leftrightarrow x = 0.25$. The concentrations of sulfuric acid are 25% in the first container and 10% in the second.

45. Let x be the amount he invests at 6% and let y be the amount he invests at 10%.

The ratio of the amounts invested gives $x = 2y$. Then the interest earned is $0.06x + 0.10y = 3520$

$\Leftrightarrow 6x + 10y = 352,000$. Substituting gives $6(2y) + 10y = 352,000 \Leftrightarrow 22y = 352,000$

$\Leftrightarrow y = 16,000$. Then $x = 2(16,000) = 32,000$. He invests \$32,000 at 6% and \$16,000 at 10%.