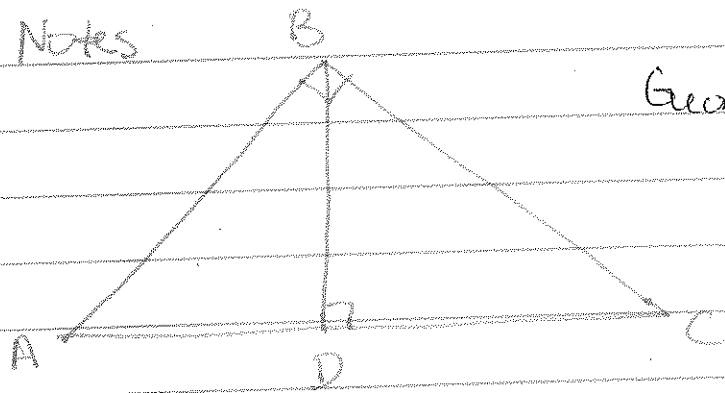


7.4 Notes



Geometric Mean

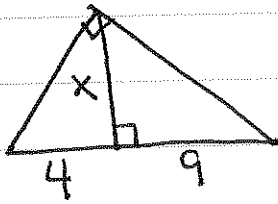
$$\frac{AD}{AB} = \frac{AB}{AC}$$

$$\frac{AD}{BD} = \frac{BD}{DC}$$

$$\frac{DC}{BC} = \frac{BC}{AC}$$

7.4

①

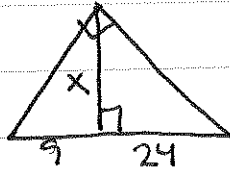


$$\frac{4}{x} = \frac{x}{9}$$

$$x^2 = 36$$

$$x = 6$$

② ⑦



$$\frac{9}{x} = \frac{x}{24}$$

$$x^2 = 216$$

$$3 \cdot 2 \sqrt{2 \cdot 3}$$

$$6\sqrt{6}$$

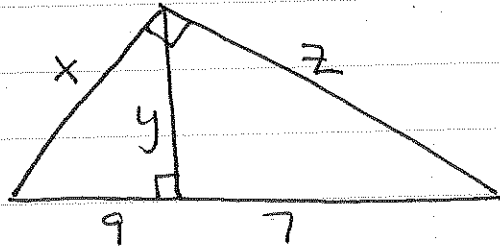
$$216$$

$$\begin{array}{c} \sqrt{216} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{108} \\ \hline 9 \end{array} \begin{array}{c} \sqrt{12} \\ \hline 3 \end{array} \begin{array}{c} \sqrt{4} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{3} \\ \hline 3 \end{array}$$

$$\begin{array}{c} \sqrt{216} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{3} \\ \hline 3 \end{array} \begin{array}{c} \sqrt{4} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{3} \\ \hline 3 \end{array}$$

$$\begin{array}{c} \sqrt{216} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{2} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{3} \\ \hline 3 \end{array}$$

34.



$$\frac{9}{y} = \frac{y}{7}$$

$$63$$

$$\begin{array}{c} \sqrt{63} \\ \hline 3 \end{array} \begin{array}{c} \sqrt{21} \\ \hline 7 \end{array}$$

$$\begin{array}{c} \sqrt{63} \\ \hline 3 \end{array} \begin{array}{c} \sqrt{7} \\ \hline 7 \end{array} \begin{array}{c} \sqrt{3} \\ \hline 3 \end{array}$$

$$y^2 = 63$$

$$3\sqrt{7} = y$$

$$\frac{9}{x} = \frac{x}{16}$$

$$x^2 = 144$$

$$x = 12$$

$$\frac{7}{z} = \frac{z}{16}$$

$$z^2 = 112$$

$$112$$

$$\begin{array}{c} \sqrt{112} \\ \hline 4 \end{array} \begin{array}{c} \sqrt{28} \\ \hline 7 \end{array} \begin{array}{c} \sqrt{4} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{2} \\ \hline 2 \end{array}$$

$$\begin{array}{c} \sqrt{112} \\ \hline 4 \end{array} \begin{array}{c} \sqrt{7} \\ \hline 7 \end{array} \begin{array}{c} \sqrt{4} \\ \hline 2 \end{array} \begin{array}{c} \sqrt{2} \\ \hline 2 \end{array}$$

$$z = 2 \cdot 2\sqrt{7}$$

$$z = 4\sqrt{7}$$