

Name _____

Date _____

Tangent Ratios - Guided Lesson Explanation

Explanation#1

Tangent Ratio: for any acute angle θ of a right triangle.

$$\tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\text{Step 3) } \tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\tan 50^\circ = \frac{200}{x}$$

$$\tan 50^\circ x = 200$$

$$1.192 x = 200$$

$$x = 200/1.192$$

$$x = 167.82 \quad \text{Answer is: } 167.82$$

Explanation#2

Tangent Ratio: for any acute angle θ of a right triangle.

$$\tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\text{Step 3) } \tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\tan V = \frac{70}{35}$$

$$\tan V = 2$$

Finding the inverse of $\tan 2$, we got 63.43° .



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Explanation#3

Tangent Ratio: for any acute angle θ of a right triangle.

$$\text{Tan } \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\text{Step 3) Tan } \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

$$\text{Tan } 35^\circ = \frac{x}{25}$$

$$\text{Tan } 35^\circ \times 25 = x$$

$$.700 \times 25 = x$$

$$x = 17.5$$

