



# Introduction to Trigonometry with Applications

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## APPLICATION EXAMPLE - SIMILAR TRIANGLES

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# Height of Unknown Object

Find the height of an unknown object using its shadow

- Measure unknown object shadow length
- Use a known height object
- Measure known object shadow length
- Apply similar triangle concept

- Statue of liberty
- 305 ft, 93 m

$$\frac{A}{B} = \frac{F}{E}$$

$$\frac{A \cdot E}{A} = \frac{A \cdot F}{B}$$

$$\frac{B}{F} \cdot E = \frac{A \cdot F}{B}$$

$$A = \frac{E \cdot B}{F}$$

