

BE-1B | FRIDAY 2-2-07

AHSGE Workbook

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①

COMPARING GEOMETRIC SHAPES

CONGRUENT

$\cong$

SAME SHAPE
AND

SAME SIZE

SIMILAR
 $\sim$

SAME SHAPE

COMPARING NUMBERS

$=$

EQUAL

$\approx$

APPROXIMATELY EQUAL TO

$<$

LESS THAN

$>$

GREATER THAN

$\leq$

LESS THAN OR EQUAL

$\geq$

GREATER THAN OR EQUAL

$\neq$

NOT EQUAL

Similar Polygons

Words: Two polygons are similar if their corresponding angles are congruent and their corresponding sides are in proportion.

Symbols: $ABCD \sim WXYZ$
The symbol $\sim$ means is similar to.

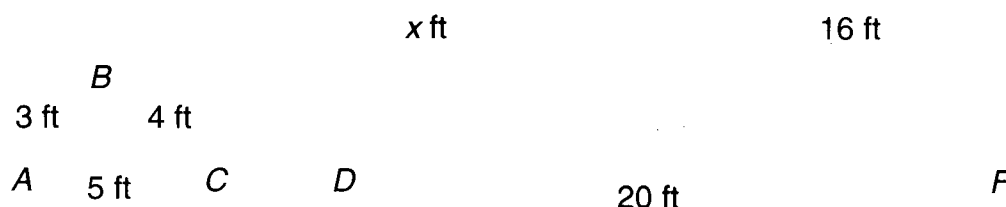
Model:

A	B	W	X
D	C	Z	Y

Example

If $\triangle ABC \sim \triangle DEF$, find the length of $\overline{ED}$.

E



$\overline{BA}$ and $\overline{ED}$ are corresponding sides.

$\overline{AC}$ and $\overline{DF}$ are corresponding sides.

Let x represent the missing measure.

$$\frac{BA}{ED} \rightarrow \frac{3}{x} = \frac{5}{20} \leftarrow \frac{AC}{DF}$$

$$3(20) = x \cdot 5$$

$$60 = 5x$$

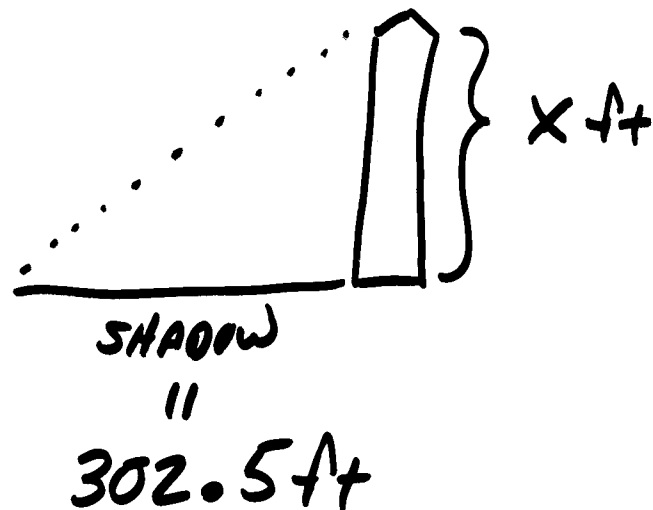
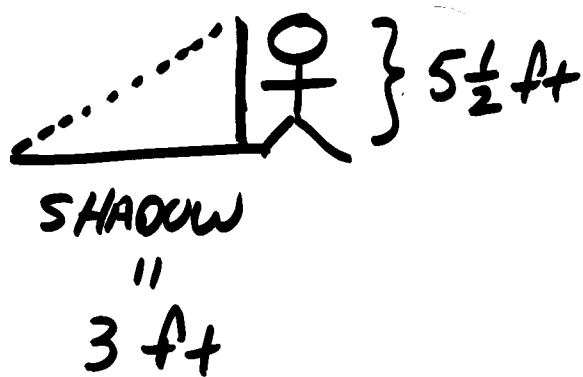
$$12 = x$$

Write a proportion using the measures of corresponding sides.
Find the cross products.

Divide each side by 5.

The length of $\overline{ED}$ is 12 feet.

EX



Find height of Washington Monument.

$$\frac{3}{302.5} = \frac{5.5}{x}$$

$$\frac{3x}{3} = \frac{5.5(302.5)}{3}$$

$$x = \frac{5.5(302.5)}{3}$$

$$x \approx 554.6 \text{ ft}$$

EX 3
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