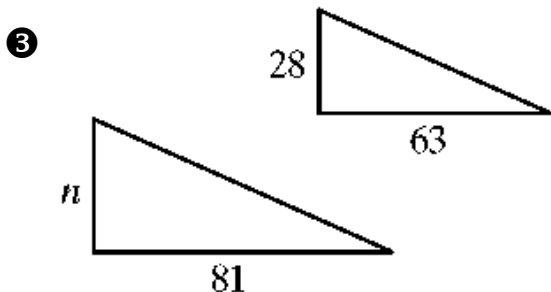Name: _____ Date: _____ Class: _____ GRADE: _____

UNIT 6: SIMILAR FIGURES

Number of questions missed	1	2	3	4	5	6	7	8	9	10
Homework Score	90	80	70	60	50	40	30	20	10	0

Each pair of figures is similar; find the value of the variable(s). Round to the nearest tenth where necessary.

❶

❷

❸

❹
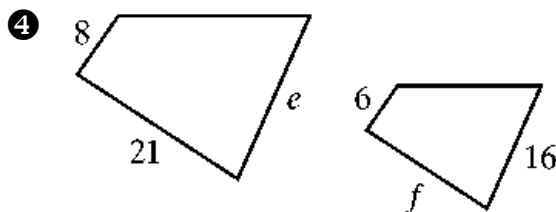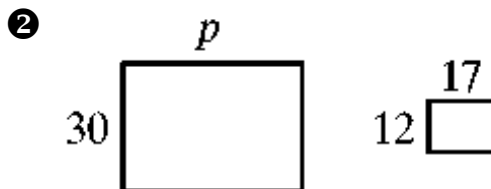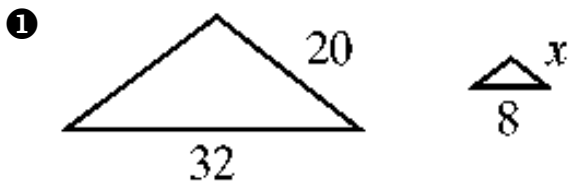
❺ A meter stick casts a shadow 1.4 m long at the same time a flagpole casts a shadow 7.7 m long. The triangle formed by the meter stick and its shadow is similar to the triangle formed by the flagpole and its shadow. How tall is the flagpole?
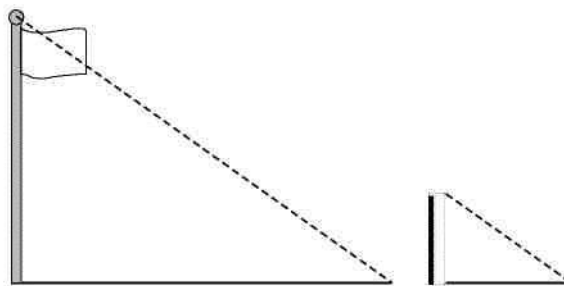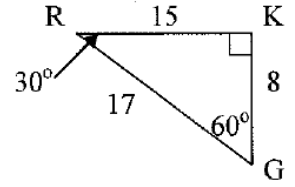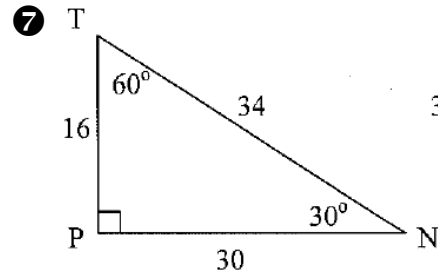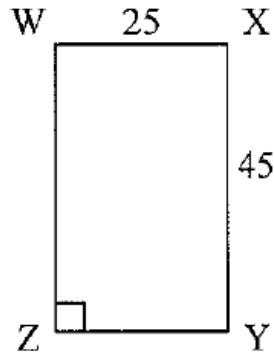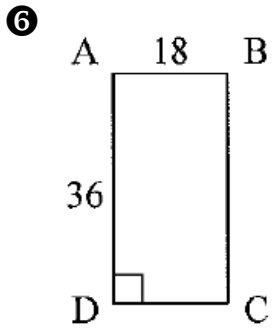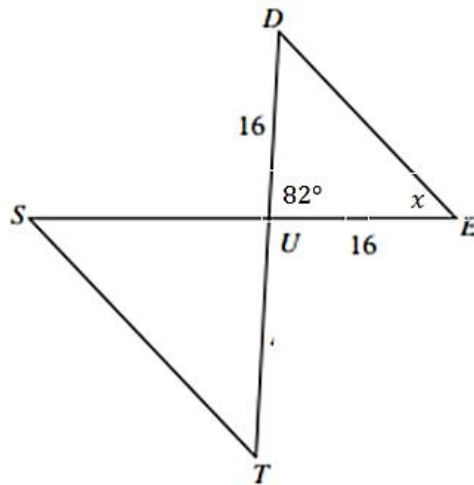
For #6-8, tell whether the figures are similar. Justify your answer.

6

A ⎯18⎯ B

36 on left side, rectangle ABCD with right angle at D, C

W ⎯25⎯ X

45 on right side, rectangle WXYZ with right angle at Z, Y

7

T, 60° angle at T, 16 on side TP, 34 on hypotenuse TN, right angle at P, 30 on PN, 30° at N

R ⎯15⎯ K, 30° at R, 17 on RG, 8 on side GK, right angle at K, 60° at G

8

M ⎯14⎯ V ⎯28⎯ U, 49 from U to T, 8 from V to L, L below

Triangle with T at top right.
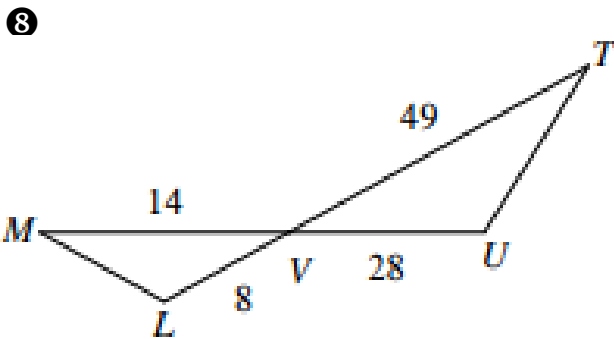
9 Given $\overline{ST} \parallel \overline{DE}$. What is the value of x.

D, 16 on SD, 82° at U, x at E, 16 on UE, S, U, T

10 Old Faithful in Yellowstone National Park shoots water 60 feet into the air that casts a shadow of 42 feet. What is the height of a nearby tree that casts a shadow 63 feet long? Assume the triangles are similar.

x ft, 60 ft, 63 ft, 42 ft