

2-8

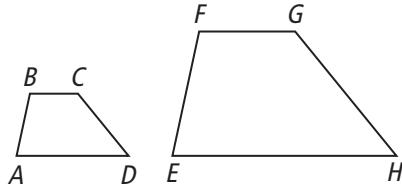
Practice

Form K

Proportions and Similar Figures

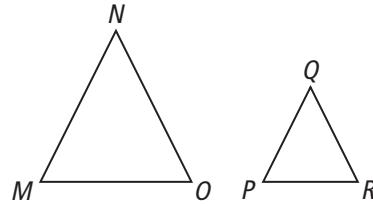
The figures in each pair are similar. Identify the corresponding sides and angles.

1. $ABCD \sim EFGH$



$\angle A$ and $\angle E$, $\angle B$ and $\angle F$, $\angle C$ and $\angle G$,
 $\angle D$ and $\angle H$; \overline{AB} and \overline{EF} , \overline{BC} and \overline{FG} , \overline{CD}
 and \overline{GH} , \overline{AD} and \overline{EH}

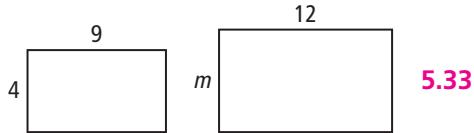
2. $\triangle MNO \sim \triangle PQR$



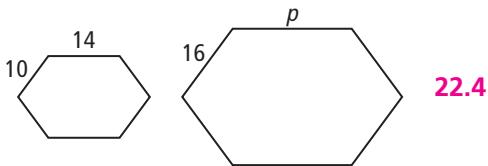
$\angle M$ and $\angle P$, $\angle N$ and $\angle Q$, $\angle O$
 and $\angle R$; \overline{MN} and \overline{PQ} , \overline{NO} and
 \overline{QR} , \overline{MO} and \overline{PR}

The figures in each pair are similar. Find the missing length.

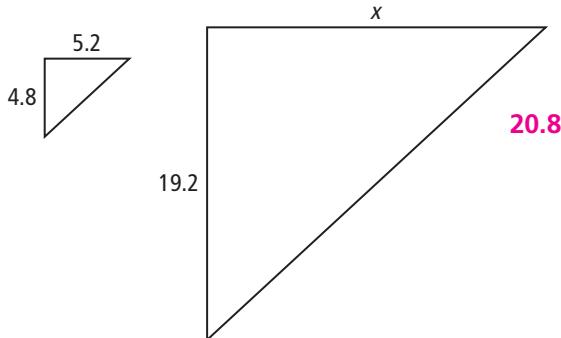
3.



4.



5.



2-8**Practice** (continued)

Form K

Proportions and Similar Figures

The scale of a map is 0.25 cm : 15 km. Find the actual distance corresponding to each map distance.

6. 0.75 cm **45 km**

7. 2 cm **120 km**

8. 3.5 cm **210 km**

9. 5.25 cm **315 km**

10. For a celebration a town is going to pass out miniature replicas of the town's bell. The replicas are 9 in. tall. If the scale of the replica is 1 in. : 0.5 ft, how tall is the actual bell? **4.5 ft**

11. An architect created a scale model of what a college campus will look like once construction is finished. The scale for the model is 2 in. : 25 ft. The tallest building in the model is 10 in. tall. How tall is the actual building? **125 ft**

12. A model of a golf course says that hole #9 is 175 yards long. If the scale of the model is 2 in. : 20 yards, how many inches are there between the tee and the hole on the model? **17.5 in.**

13. **Open-Ended** Give an example of similar figures in your school.
Answers may vary. See students' work.

14. **Reasoning** You are given two similar triangles. You know that one pair of corresponding sides is equal. What do you know about the other sides? Explain.

The other sides are also equal. Since the corresponding angles and one pair of corresponding sides is equal, the scale is 1 : 1. The other pairs of corresponding sides are also equal.