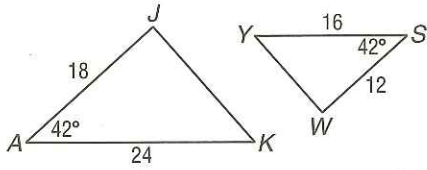


6-3 Practice

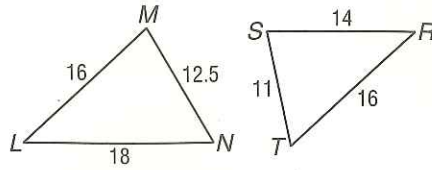
Similar Triangles

Determine whether each pair of triangles is similar. Justify your answer.

1.

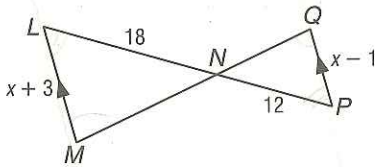


2.

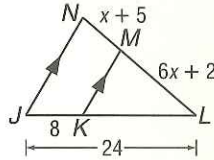


ALGEBRA Identify the similar triangles, and find x and the measures of the indicated sides.

3. \overline{LM} and \overline{QP}

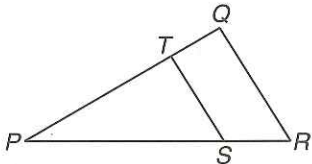


4. \overline{NL} and \overline{ML}

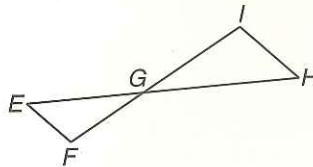


Use the given information to find each measure.

5. If $\overline{TS} \parallel \overline{QR}$, $TS = 6$, $PS = x + 7$, $QR = 8$, and $SR = x - 1$, find PS and PR .



6. If $\overline{EF} \parallel \overline{HI}$, $EF = 3$, $EG = x + 1$, $HI = 4$, and $HG = x + 3$, find EG and HG .



INDIRECT MEASUREMENT For Exercises 7 and 8, use the following information.

A lighthouse casts a 128-foot shadow. A nearby lamppost that measures 5 feet 3 inches casts an 8-foot shadow.

7. Write a proportion that can be used to determine the height of the lighthouse.

8. What is the height of the lighthouse?

NAME _____

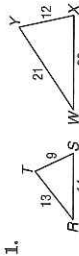
DATE _____

PERIOD _____

6-3 Skills Practice

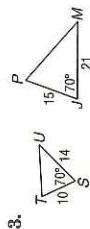
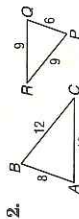
Similar Triangles

Determine whether each pair of triangles is similar. Justify your answer.

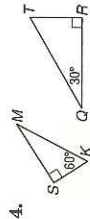


No; the sides are not proportional.

yes; $\triangle ABC \sim \triangle PQR$ (or $\triangle QPR$); SSS Similarity

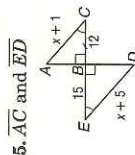


yes; $\triangle STU \sim \triangle JPM$; SAS Similarity



yes; $\triangle SKM \sim \triangle RTQ$; AA Similarity

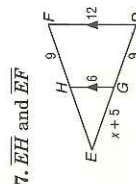
ALGEBRA Identify the similar triangles, and find x and the measures of the indicated sides.



$\triangle ABC \sim \triangle DBE$; 15; 16; 20

6.

$\triangle JKL \sim \triangle MNL$; 10; 28; 7



$\triangle DEF \sim \triangle GEH$; 4; 9; 18

8.

$\triangle RST \sim \triangle UVT$; 12; 6; 14

NAME _____

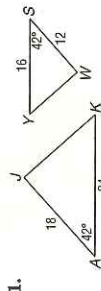
DATE _____

PERIOD _____

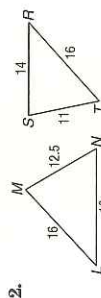
6-3 Practice (Average)

Similar Triangles

Determine whether each pair of triangles is similar. Justify your answer.



yes; $\triangle JAK \sim \triangle WSY$; SAS Similarity



No; the sides are not proportional.

ALGEBRA Identify the similar triangles, and find x and the measures of the indicated sides.

3.

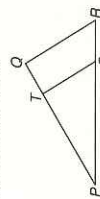
$\triangle LMN \sim \triangle PQN$; 9; 12; 8

4.

$\triangle JLN \sim \triangle KLM$; 2; 21; 14

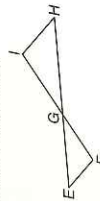
Use the given information to find each measure.

5. If $\overline{TS} \parallel \overline{QR}$, $TS = 6$, $PS = x + 7$, $QR = 8$, and $SR = x - 1$, find PS and PR .



$PS = 12$; $PR = 16$

6. If $\overline{EF} \parallel \overline{HI}$, $EF = 3$, $EG = x + 1$, $HI = 4$, and $HG = x + 3$, find EG and HG .



$EG = 6$; $HG = 8$

INDIRECT MEASUREMENT For Exercises 7 and 8, use the following information. A lighthouse casts a 128-foot shadow. A nearby lamppost that measures 5 feet 3 inches casts an 8-foot shadow.

7. Write a proportion that can be used to determine the height of the lighthouse.

Sample answer: If $x =$ height of lighthouse, $5.25 = \frac{x}{128}$.

8. What is the height of the lighthouse? **84 ft**