

9. If $\triangle ABC \sim \triangle NJT$, then $\angle B \cong \underline{\hspace{1cm}}$.

7-3

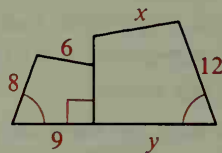
10. If quad. $DEFG \sim$ quad. $PQRS$, then $\frac{FG}{RS} = \frac{GD}{\underline{\hspace{1cm}}}$.

11. $\triangle ABC \sim \triangle JET$, and the scale factor of $\triangle ABC$ to $\triangle JET$ is $\frac{5}{3}$.

a. If $BC = 20$, then $ET = \underline{\hspace{1cm}}$.

b. If the perimeter of $\triangle JET$ is 30, then the perimeter of $\triangle ABC$ is $\underline{\hspace{1cm}}$.

12. The quadrilaterals are similar.
Find the values of x and y .



13. a. $\triangle RTS \sim \underline{\hspace{1cm}}$

7-4

b. What postulate or theorem justifies the statement in part (a)?

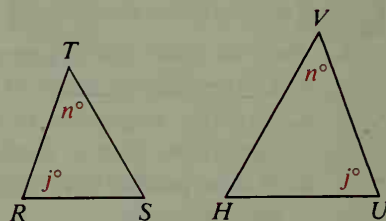
14. $\frac{RT}{\underline{\hspace{1cm}}} = \frac{TS}{\underline{\hspace{1cm}}} = \frac{RS}{\underline{\hspace{1cm}}}$

15. Suppose you wanted to prove

$$RS \cdot UV = RT \cdot UH.$$

You would first use similar triangles to show that

$$\frac{RS}{\underline{\hspace{1cm}}} = \frac{\underline{\hspace{1cm}}}{\underline{\hspace{1cm}}}.$$



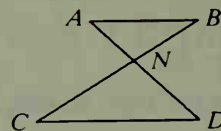
Can the two triangles be proved similar? If so, state the similarity and the postulate or theorem you would use. If not, write *no*.

16. $\angle A \cong \angle D$

17. $\angle B \cong \angle D$

18. $CN = 16$, $ND = 14$,
 $BN = 7$, $AN = 8$

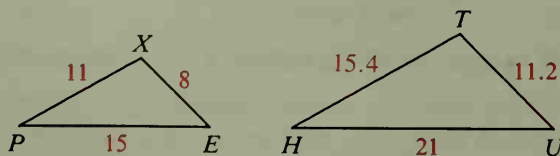
19. $AN = 7$, $AB = 13$,
 $DN = 14$, $DC = 26$



Exs. 16-19

7-5

- 20.



21. Which proportion is *incorrect*?

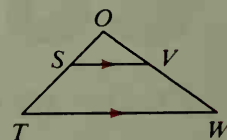
(1) $\frac{OS}{ST} = \frac{OV}{VW}$

(2) $\frac{SV}{TW} = \frac{OS}{ST}$

(3) $\frac{OT}{OW} = \frac{OS}{OV}$

22. If $OS = 8$, $ST = 12$, and $OV = 10$, then $OW = \underline{\hspace{1cm}}$.

23. If $OS = 8$, $ST = 12$, and $OW = 24$, then $VW = \underline{\hspace{1cm}}$.



7-6

24. In $\triangle ABC$, the bisector of $\angle B$ meets \overline{AC} at K . $AB = 18$, $BC = 24$, and $AC = 28$. Find AK .