5. 



Reasons

7.

Given: $\triangle \mathrm{ABC} \sim \Delta \mathrm{DEF}$

Find: AC and EF

9.

A shadow problem: Mannertink observed that a tree was casting a $30-\mathrm{m}$ shadow. A nearby flagpole was casting a $24-\mathrm{m}$ shadow. If the flagpole was 20 m high, how tall was the tree?
10.

If two similar kites have perimeters of 21 and 28 , what is the ratio of the measures of two corresponding sides?
11.

Using the diagram, show that $\overline{\mathrm{AB}} \| \overline{\mathrm{DE}}$.

15.

Given: $\quad \mathrm{m}\|\mathrm{p}\| \mathrm{r}$ $J$ lies in $m$ $\overline{\mathrm{KT}}$ lies in p $\overline{\mathrm{OS}}$ lies in $r$

Prove: $\frac{\mathrm{JK}}{\mathrm{JO}}=\frac{\mathrm{JT}}{\mathrm{JS}}$

18.

If $\Delta T V K \sim \Delta X Z Y, T V=8, V K=9, T K=10$, and $Z Y=4$, find $X Y$.
19.

Given: $\overleftrightarrow{B E} \| \overleftrightarrow{C D}$
Find: CD

20.

Shad is 3 ft . from a lamp post that is 12 ft high. Shad is $5 \frac{1}{2} \mathrm{ft}$. tall. Assuming the sun as the light source and that the end of the lamp post's shadow and the end of Shad's shadow meet at the same point, how long is Shad's shadow?

