

Answer Key

Lesson 6.4

Practice Level A

- $\triangle GHI$ 2. GI, HI, GH 3. x 4. 8
- $13\frac{1}{3}$ 6. $10\frac{2}{3}$
- A and B; $\triangle EFG$ is a 30° - 60° - 90° triangle.
- A and B; $\triangle EFG$ is a 40° - 70° - 70° triangle.
- not similar 10. similar
- cannot be determined 12. similar
- yes; $\triangle NMO \sim \triangle QRP$; both are 38° - 71° - 71° \triangle
- not enough information to determine
- yes; $\triangle DFG \sim \triangle RST$; both are 60° - 60° - 60° \triangle
- yes; $\triangle ABE \sim \triangle DBC$; both are 28° - 62° - 90° \triangle
- yes; $\triangle XYW \sim \triangle ZYV$; There are two pairs of \cong alt. int. \sphericalangle s and one pair of \cong vertical \sphericalangle s.
- yes; $\triangle SRT \sim \triangle SQU$; There are two pairs of \cong corresponding \sphericalangle s and $\angle S \cong \angle S$.
- By the markings, $\angle N \cong \angle X$ and $\angle T \cong \angle Y$, so $\triangle NMT \sim \triangle XBY$ by the AA Similarity Post.
- $\angle A \cong \angle A$ by the Reflexive Prop. Because $\overline{BD} \parallel \overline{CE}$, $\angle ABD \cong \angle C$ by the Corr. Angles Post. So, $\triangle ABD \sim \triangle ACE$ by the AA Similarity Post.
- Because $\overline{HG} \parallel \overline{IL}$ and $\overline{GJ} \parallel \overline{LK}$, $\angle H \cong \angle LIK$ and $\angle GJK \cong \angle K$ by the Corr. Angles Post. So, $\triangle HGJ \sim \triangle ILK$ by the AA Similarity Post.
- You are given that \overline{DE} is a midsegment of $\triangle ABC$. Then $\overline{DE} \parallel \overline{AC}$ by the Midsegment Thm., which means that $\angle A \cong \angle BDE$ and $\angle C \cong \angle BED$ by the Corr. Angles Post. Therefore, $\triangle ABC \sim \triangle DBE$ by the AA Similarity Post.
- $37\frac{1}{3}$ ft