## Lesson 5 Practice Problems

1. What is the measure of angle $A^{\prime} B^{\prime} C$ ?

A. $20^{\circ}$
B. $40^{\circ}$
C. $60^{\circ}$
D. $80^{\circ}$
2. Triangle $D E F$ is formed by connecting the midpoints of the sides of triangle $A B C$. The lengths of the sides of $D E F$ are shown. What is the length of $A B$ ?

3. Angle $A B C$ is taken by a dilation with center $P$ and scale factor $\frac{1}{3}$ to angle $A^{\prime} B^{\prime} C^{\prime}$. The measure of angle $A B C$ is $21^{\circ}$. What is the measure of angle $A^{\prime} B^{\prime} C^{\prime}$ ?
(From Unit 3, Lesson 4.)
4. Draw 2 lines that could be the image of line $m$ by a dilation. Label the lines $n$ and p.

(From Unit 3, Lesson 4.)
5. Is it possible for polygon $A B C D E$ to be dilated to figure $V W X Y Z$ ? Explain your reasoning.

(From Unit 3, Lesson 3.)
6. Triangle $X Y Z$ is scaled and the image is $X^{\prime} Y^{\prime} Z^{\prime}$. Write 2 equations that could be used to solve for $a$.

(From Unit 3, Lesson 2.)
7. a. Lin is using the diagram to prove the statement, "If a parallelogram has one right angle, it is a rectangle." Given that $E F G H$ is a parallelogram and angle $H E F$ is a right angle, write a statement that will help prove angle $F G H$ is also a right angle.
b. Han then states that the 2 triangles created by diagonal $E G$ must be congruent. Help Han write a proof that triangle $E H G$ is congruent to triangle $G F E$.

(From Unit 2, Lesson 12.)
