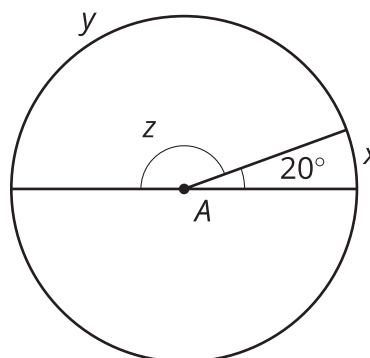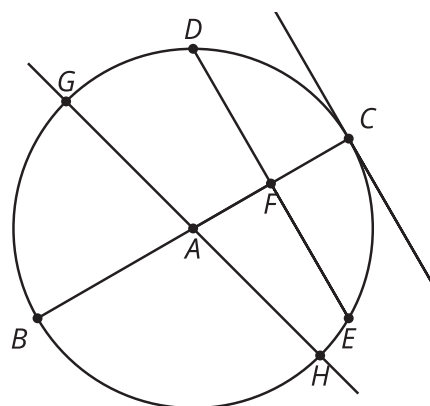# Lesson 1 Practice Problems

1. Find the values of x, y, and z.

2. Give an example from the image of each kind of segment.

    a. a diameter

    b. a chord that is not a diameter

    c. a radius

3. Identify whether each statement must be true, could possibly be true, or definitely can't be true.

    a. A diameter is a chord.

    b. A radius is a chord.

    c. A chord is a diameter.

    d. A central angle measures 90°.

4. Write an equation of the altitude from vertex A.
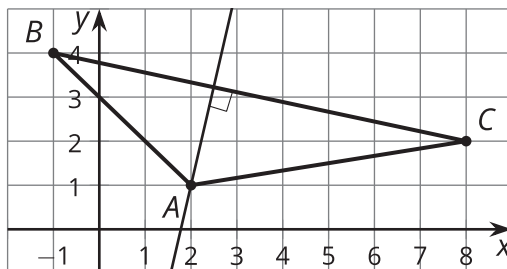
5. Triangle ABC has vertices at $(5, 0)$, $(1, 6)$, and $(9, 3)$. What is the point of intersection of the triangle's medians?

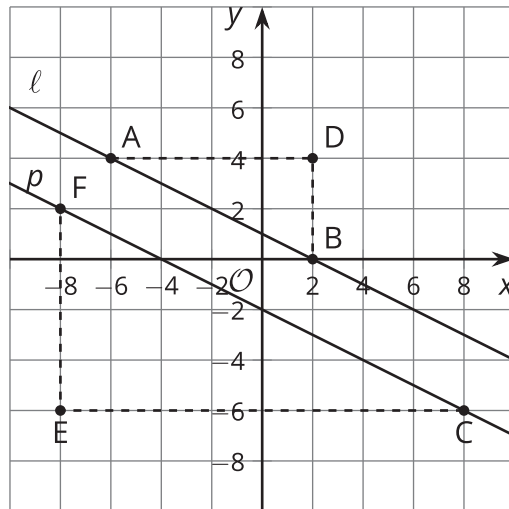   A. The medians do not intersect in a single point.

   B. $(3, 3)$

   C. $(5, 3)$

   D. $(3, 4.5)$

6. Consider the parallelogram with vertices at $(0, 0)$, $(8, 0)$, $(4, 6)$, and $(12, 6)$. Where do the diagonals of this parallelogram intersect?

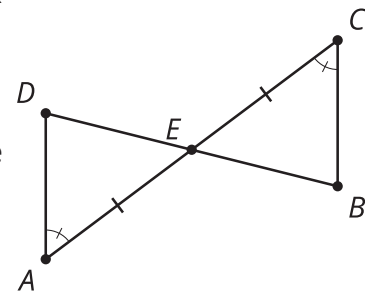7. Lines ℓ and p are parallel. Select **all** true statements.

A. Triangle ADB is congruent to triangle CEF.

B. The slope of line ℓ is equal to the slope of line p.

C. Triangle ADB is similar to triangle CEF.

D. $\sin(A) = \sin(C)$

E. $\cos(B) = \sin(C)$

(From Unit 6, Lesson 10.)

8. Mai wrote a proof that triangle AED is congruent to triangle CEB. Mai's proof is incomplete. How can Mai fix her proof?

$$\angle A \cong \angle C, \overline{AE} \cong \overline{CE}$$

We know side AE is congruent to side CE and angle A is congruent to angle C. By the Angle-Side-Angle Triangle Congruence Theorem, triangle AED is congruent to triangle CEB.

(From Unit 2, Lesson 7.)