Name: _____ **Date:** _____ **Rating/Score:** _____

Activity 1: Give Your Best Choice!

Directions: Write the letter of your answer on the blank provided before each number.

____1. A quadrilateral with exactly one pair of parallel sides.
A. Kite B. Rectangle C. Square D. Trapezoid

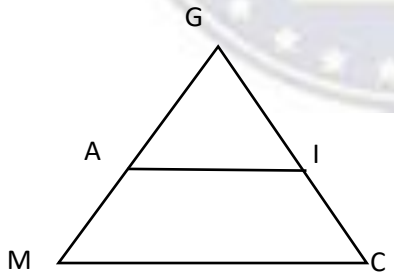
____2. The other term used for non-parallel sides of a trapezoid.
A. Bases B. Base Angles C. Legs D. Sides

____3. Which of the following statements is true about the median of a trapezoid?
A. The median of a trapezoid is parallel to each base and its length is one-third of the sum of the length of its bases.
B. The median of a trapezoid is equal to half of the sum of the length of its bases.
C. The median of a trapezoid is equal to half of the product of the sum of the length of its bases and its altitude.
D. The median of a trapezoid is equal to the sum of the length of its bases.

____4. If the upper base and the lower base of a trapezoid measure 12 cm and 18 cm respectively, how long is the median?
A. 15 cm B. 16 cm C. 17 cm D. 18 cm

____5. Which of the following statements is true about the midline theorem?
A. The segment joining the midpoints of the two sides of a triangle is equal to the third side.
B. The segment joining the midpoints of the two sides of a triangle is equal to half the length of the third side and perpendicular to it.
C. The segment joining the midpoints of the two sides of a triangle is equal to half the length of the third side and parallel to it.
D. The segment joining the midpoints of the two sides of a triangle is equal to the length of the third side and parallel to it.

Use the figure below for numbers 6-8.



____6. In $\triangle$MCG, A and I are the midpoints of $\overline{MG}$ and $\overline{CG}$, respectively. If $\overline{AI}$ = 10.5, what is $\overline{MC}$?
A. 20 B. 21 C. 22 D. 23

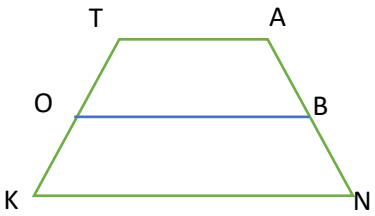
____7. In the figure, if $\overline{CG} = 32$, what is $\overline{GI}$?
A. 16 B. 8 C. 4 D. 2

Specific Week: Week 3 and 4
Target Competency: Proves the Midline Theorem, proves theorems on trapezoids and kites, and solve problems involving parallelograms, trapezoids, and kites.
Note to the Teacher: This LAS is designed to develop the students' comprehension and understanding about the applications of the different theorems on trapezoids, parallelograms, and kites in solving different problems involving them. Reference: Learners' Material, 327-343.

____8. If $\overline{AI} = 3x - 2$ and $\overline{MC} = 9x - 13$, what is the value of x?

A. 1 B. 2 C. 3 D. 4

Use the figure below for numbers 9-10.



____9. Using trapezoid TANK with median $\overline{OB}$, if $\overline{OB}$ = 9 and $\overline{AT}$ = 5, find $\overline{KN}$.

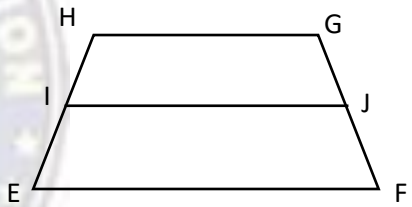
A.12 B. 13 C. 14 D.15

____10. If $\overline{AT}$ = 3x + 8, $\overline{OB}$ = 5x + 4, and $\overline{KN}$ = 6x + 4, find x.

A. 4 B. 5 C. 6 D. 8

Activity 2: Go For It!

A. Refer to trapezoid EFGH with median $\overline{IJ}$. Write your answer for each problem on the blank before each number.

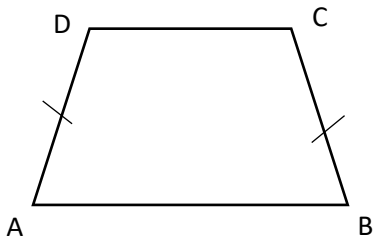


_____1. If $\overline{IJ}$ = x, $\overline{HG}$ = 8 and $\overline{EF}$ = 12, what is the value of x?

_____2. If $\overline{IJ}$ = y + 3, $\overline{HG}$ = 14 and $\overline{EF}$ = 18, what is the value of y? What is $\overline{IJ}$?

_____3. If $\overline{HG}$ = x, $\overline{IJ}$ = 16 and $\overline{EF}$ = 22, what is the value of x?

B. Given isosceles trapezoid ABCD. Write your answer for each problem on the blank before each number.



_____1. If m$\angle A = 70$, what is m$\angle B$?

_____2. If m$\angle D = 105$, what is m$\angle C$?

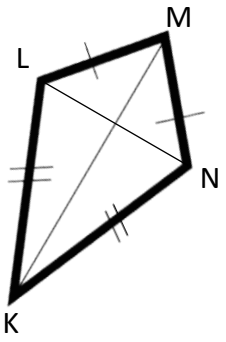
_____3. If m$\angle B = 2x - 6$ *and* $m\angle A = 82$, what is x?

_____4. If m$\angle C = 2(y + 4)$ and m$\angle D = 116$, what is y?

_____5. If $\overline{AC}$ = 56 cm, what is $\overline{DB}$?

Specific Week: Week 3 and 4
Target Competency: Proves the Midline Theorem, proves theorems on trapezoids and kites, and solve problems involving parallelograms, trapezoids, and kites.
Note to the Teacher: This LAS is designed to develop the students' comprehension and understanding about the applications of the different theorems on trapezoids, parallelograms, and kites in solving different problems involving them. Reference: Learners' Material, 327-343.

C. Consider kite KLMN on the right. Write your answer for each problem on the blank before each number.



_____1. Name the pairs of congruent and adjacent sides.

_____2. If $\overline{LM}$ = 6, what is $\overline{MN}$?

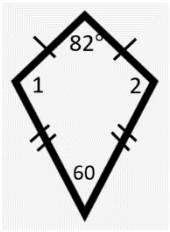
_____3. If $\overline{KN}$ = 10.5, what is $\overline{KL}$?

_____4. If $\overline{LN}$ = 7 cm and $\overline{KM}$ = 13 cm, what is the area?

_____5. If the area is 96 cm² and $\overline{LN}$ = 8 cm, what is $\overline{KM}$?

Activity 3: Watch Out! Another Kite!

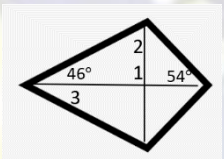
A. Find the measures of the numbered angles in each kite. Write your answer on the blank after each angle.

1. 

Find:

a. m∠1 = _____

b. m∠2 = _____

2. 

Find:

c. m∠1 = _____

d. m∠2 = _____

e. m∠3 = _____

Activity 4: You Can Do It!

A. ***Directions:*** Tell whether each statement is TRUE or FALSE. Write your answer on the blank before each number.

_____1. The diagonals of a trapezoid are congruent

_____2. The opposite sides of isosceles trapezoids are congruent

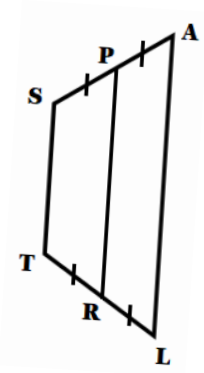
_____3. The opposite angles of a kite can be supplementary

_____4. The length of the median of a trapezoid is one half the sum of the lengths of the bases.

_____5. If □SOUL is a kite, then $\overline{SO} \perp \overline{OL}$.

Specific Week: Week 3 and 4
Target Competency: Proves the Midline Theorem, proves theorems on trapezoids and kites, and solve problems involving parallelograms, trapezoids, and kites.
Note to the Teacher: This LAS is designed to develop the students' comprehension and understanding about the applications of the different theorems on trapezoids, parallelograms, and kites in solving different problems involving them. Reference: Learners' Material, 327-343.

In trapezoid SALT, $\overline{ST}$ = 16, $\overline{PS}$ = 9, $\overline{AL}$ = 34, and m∠S = 110°. Find:



_____ 6. $\overline{PR}$

_____ 7. $\overline{TL}$

_____ 8. m∠T

_____ 9. m∠A

B. Given a parallelogram ABCD: $\overline{AB}$ = (3X – 5) cm, $\overline{BC}$ = (2y – 7) cm, $\overline{CD}$ = (x+7) cm, and $\overline{AD}$ = (y + 3).

____1. What is the value of x?

____2. How long is $\overline{AB}$?

____3. What is the value of y?

____4. How long is $\overline{AD}$?

____5. What is the perimeter of parallelogram ABCD?

Activity 5: Show More What You've Got!

Directions: Solve the following problems. Use an extra sheet of pad paper for your solutions.

1. The perimeter of a kite is 64cm. the length of one of its side is 14cm more than half the length of another. Find the length of each side of the kite.

2. If the number of degrees in one angle of an isosceles trapezoid is x, and the opposite angle is x + 20°, how many how many degrees are there in each angle?

3. Two consecutive angles of a parallelogram have measures 4(x + 5) and 2(3x+20), respectively. Find the measures of the angles.

Specific Week: Week 3 and 4
Target Competency: Proves the Midline Theorem, proves theorems on trapezoids and kites, and solve problems involving parallelograms, trapezoids, and kites.
Note to the Teacher: This LAS is designed to develop the students' comprehension and understanding about the applications of the different theorems on trapezoids, parallelograms, and kites in solving different problems involving them. Reference: Learners' Material, 327-343.

ANSWER KEY:

ACTIVITY 1	ACTIVITY 2	ACTIVITY 3	ACTIVITY 4	ACTIVITY 5
1. D 2. C 3. B 4. A 5. C 6. B 7. A 8. C 9. B 10. x = 4	**A.** 1. x =10 2. y = 13 IJ = 16 3. x = 10 **B.** 1. m∠B = 70 2. m∠C = 105 3. x = 44 4. y = 54 5. DB = 56 cm **C.** 1. $\overline{LM}$ and $\overline{MN}$; $\overline{LK}$ and $\overline{NK}$ 2. MN = 6 3. KL = 10.5 4. A = 45.5 cm^2 5. KM = 24 cm	1. a. m∠1 = 109° b. m∠2 = 109° 2. c. m∠1 = 90° d. m∠2 = 44° e. m∠3 = 46°	**A.** 1. FALSE 2. FALSE 3. TRUE 4. TRUE 5. FALSE 6. 25 7. 18 8. 110° 9. 70° **B.** 1. X = 6 2. $\overline{AB}$ = 13 3. Y = 10 4. $\overline{AD}$ = 13 5. Perimeter = 52	1. 12cm, 12cm, 20cm, 20cm 2. 80°, 80°, 100°, 100° 3. 112°, 112°, 68°' and 68°

Specific Week: Week 3 and 4
Target Competency: Proves the Midline Theorem, proves theorems on trapezoids and kites, and solve problems involving parallelograms, trapezoids, and kites.
Note to the Teacher: This LAS is designed to develop the students' comprehension and understanding about the applications of the different theorems on trapezoids, parallelograms, and kites in solving different problems involving them. Reference: Learners' Material, 327-343.