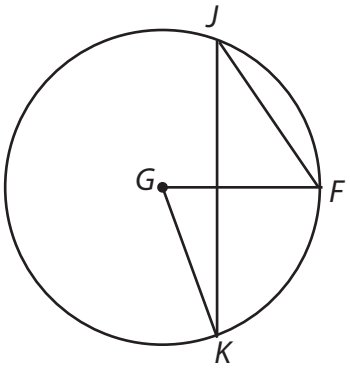
Name: **Partners:** **Math 2**

Date: **Review 3 Sample Version**



[A] Circle whether each statement is true or false.

T F 1. $m\angle KGF = 2(m\angle KJF)$

T F 2. All squares are similar.

T F 3. Every rhombus is a parallelogram.

T F 4. Point P can exist in two different locations.

T F 5. The sum of the interior angles in a 9-sided polygon is 7(180°).

T F 6. The diagonals of a rectangle bisect each other.

T F 7. The scale factor between two congruent figures is 100.

T F 8. In a reflection, the image is congruent to the pre-image.

T F 9. The letter "A" is a horizontal reflection of itself.

T F 10. The scale factor from a square of width 2 to a square of width 6 is 3.

T F 11. $\overline{AB}$ represents a line, and AB represents the length of a line.

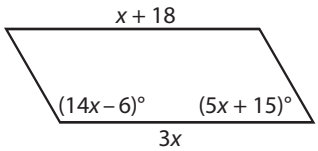
T F 12. A triangle with sides 6, 7, and 10 is similar to a triangle with sides 20, 12, and 14.

T F 13. If one circle is ¾ as wide as another, then its area is ¾ • ¾ times that of the first circle.

T F 14. A scale factor greater than 1 will enlarge a figure, and a scale factor less than 1 will shrink a figure.

[B] For each problem, write two different equations that could be used to solve for *x*, and solve both.

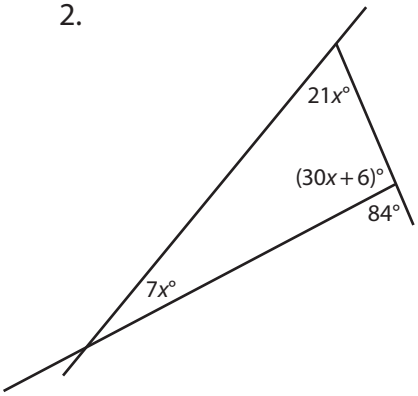
1.



$3x = x + 18$
$2x = 18$
$x = 9$

$14x - 6 + 5x + 15 = 180$
$19x + 9 = 180$
$19x = 171$
$x = 9$

2.



$30x + 6 + 84 = 180$
$30x = 90$
$x = 3$

$7x + 21x + 30x + 6 = (3 - 2)180$
$58x + 6 = 180$
$58x = 174$
$x = 3$

[C] Sketch the following. Use a ruler or protractor to make sure your sketches are approximately correct.

1. $\overrightarrow{AL} \perp \overrightarrow{CL}$

2. $GS = HS$

3. $\angle RTY \cong \angle RTE$

4. $\angle VUP$ is a central angle that is about 75°

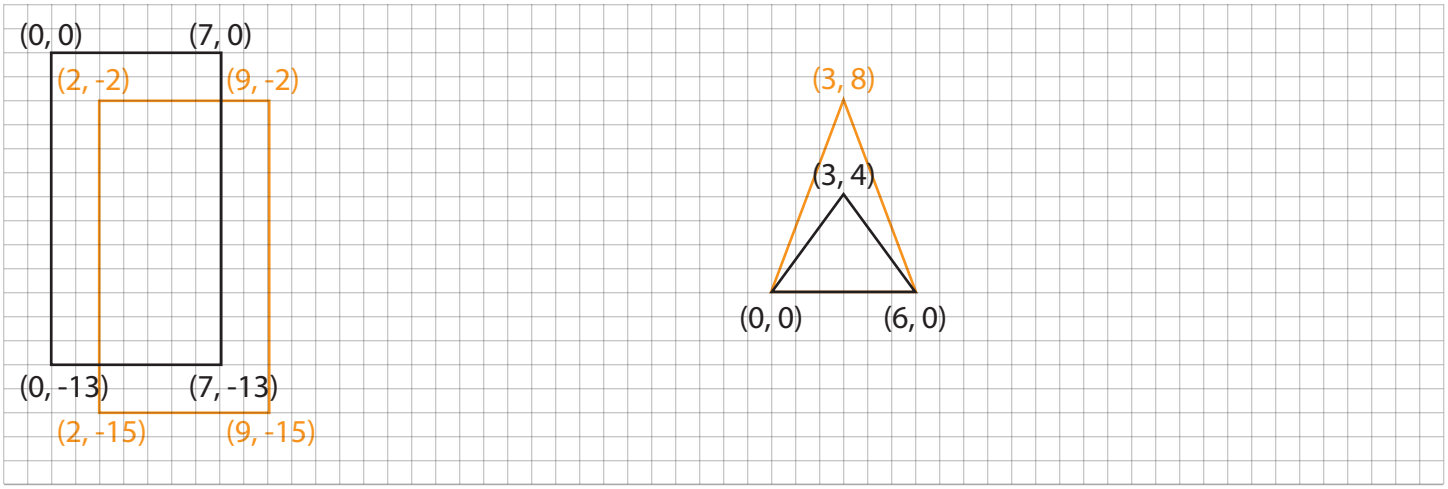
[D] Write the given transformation in mapping notation, and then sketch the image under the mapping. Label the coordinates of the vertices of the image.

1. right two units and down two units

   $(x, y) \rightarrow (\underline{\ x + 2\ }, \underline{\ y - 2\ })$

2. twice as tall

   $(x, y) \rightarrow (\underline{\ x\ }, \underline{\ 2y\ })$



[E] Point *A* is (2, 8), and point *B* is (-4, 20). Using equations only, solve for the following.

1. the slope m of $\overleftrightarrow{AB}$

   $m = \frac{20 - 8}{-4 - 2} = -2$

2. the y-intercept b of $\overleftrightarrow{AB}$

   $8 = -2(2) + b$

   $8 = -4 + b$

   $12 = b$

3. the equation of $\overleftrightarrow{AB}$

   $y = -2x + 12$

4. the midpoint D of $\overline{AB}$

   $D = (\frac{2 - 4}{2}, \frac{8 + 20}{2}) = (-1, 14)$

[F] Bonus.

1. Sketch a line segment with the given slope, and estimate the angle it makes with a horizontal line.

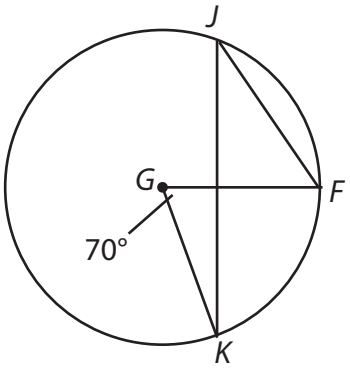
a) 1 45°

b) 0.6 30°

Name: **Partners:** **Math 2**

Date: **Review 3 Version A**

[A] Circle whether each statement is true or false.



T F 1. $m\angle KJF = 35°$

T F 2. All rectangles are similar.

T F 3. Every square is a rhombus.

T F 4. Point *P* cannot exist in two different locations.

T F 5. Each angle of a regular 18-sided polygon is 100°.

T F 6. The diagonals of a parallelogram bisect each other.

T F 7. The scale factor between two congruent figures is 1.

T F 8. In a translation, the image is congruent to the pre-image.

T F 9. The letter "q" is a horizontal and vertical reflection of the letter "b".

T F 10. The scale factor from a circle of radius 11 to a circle of radius 52 is $\frac{52}{11}$.

T F 11. $\overline{NK}$ represents a line segment, and *NK* represents the length of a line segment.

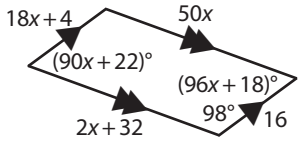
T F 12. A triangle with sides 25, 28, and 29 is similar to a triangle with sides 45, 48, and 49.

T F 13. If one cube is ¾ as wide as another, then its volume is ¾ • ¾ • ¾ times that of the first cube.

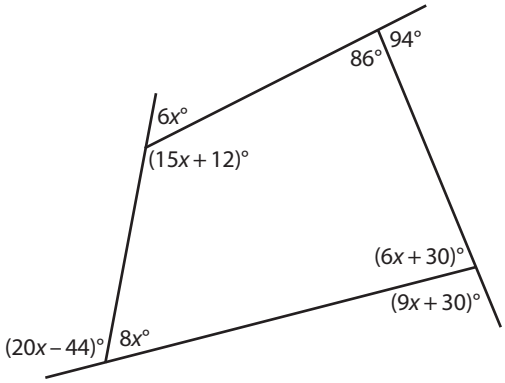
T F 14. A scale factor greater than 1 will enlarge a figure, and a scale factor less than 1 will shrink a figure.

[B] For each problem, write an equation different than what your partners have written, and solve it.

1.



2.



[C] Sketch the following. Use a ruler or protractor to make sure your sketches are approximately correct.

1. $\overrightarrow{AB} \perp \overrightarrow{EF}$

2. $PX = XC$

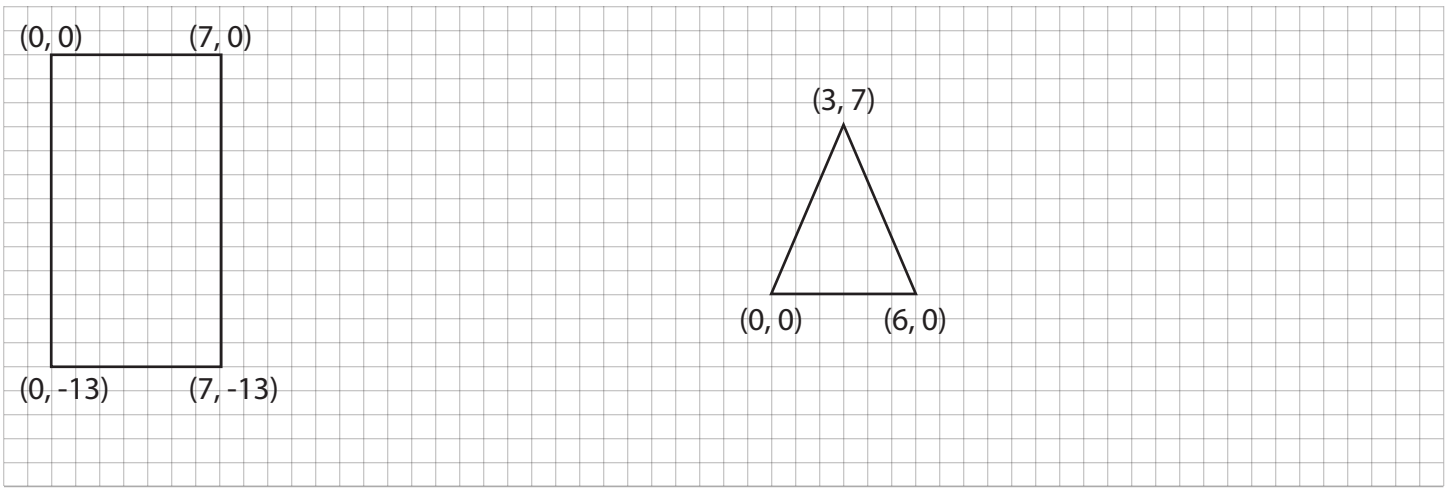
3. $\angle ABC \cong \angle DBC$

4. $\angle DBC$ is a central angle that is about 45°

[D] Write the given transformation in mapping notation, and then sketch the image under the mapping. Label the coordinates of the vertices of the image.

1. down five units and left two units
   $(x, y) \rightarrow$ (_____, _____)

2. twice as wide
   $(x, y) \rightarrow$ (_____, _____)



[E] Point *A* is (2, 8), and point *B* is (4, 18). Using equations only, solve for the following.

1. the slope m of $\overleftrightarrow{AB}$

2. the y-intercept b of $\overleftrightarrow{AB}$

3. the equation of $\overleftrightarrow{AB}$

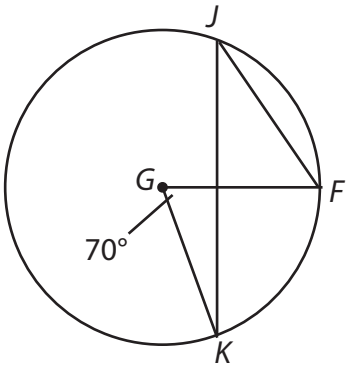
4. the midpoint D of $\overline{AB}$

[F] Do the following to organize your group's reviews each day.

1. Put your name and each of your partners' names at the top of your review.
2. Arrange the reviews from A to D, all facing the same way.
3. Staple the reviews on the right if you plan to unstaple them later to continue working. Staple them in the top left corner when they are turned in for the final time.

Name: **Math 2**

Date: **Review 3 Version B**



[A] Circle whether each statement is true or false.

T F 1. $m\angle KJF = 35°$

T F 1. All rectangles are similar.

T F 1. Every square is a rhombus.

T F 3. Point P cannot exist in two different locations.

T F 4. Each angle of a regular 18-sided polygon is 100°.

T F 5. The diagonals of a parallelogram bisect each other.

T F 2. The scale factor between two congruent figures is 1.

T F 3. For translations, an image is congruent to its pre-image.

T F 4. The letter "q" is a horizontal and vertical reflection of the letter "b".

T F 5. The scale factor from a circle of radius 11 to a circle of radius 52 is $\frac{52}{11}$.

T F 11. $\overline{NK}$ represents a line segment, and NK represents the length of a line segment.

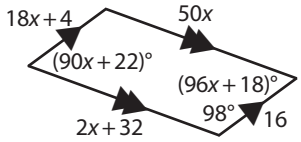
T F 6. A triangle with sides 25, 28, and 29 is similar to a triangle with sides 45, 48, and 49.

T F 7. If one cube is ¾ as wide as another, then its volume is ¾ • ¾ • ¾ times that of the first cube.

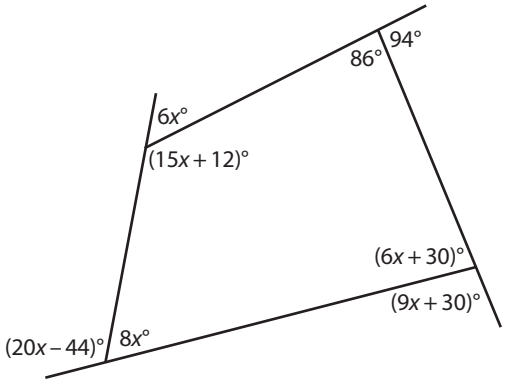
T F 8. A scale factor greater than 1 will enlarge a figure, and a scale factor less than 1 will shrink a figure.

[B] For each problem, write an equation different than what your partners have written, and solve it.

1.



2.



[C] Sketch the following. Use a ruler or protractor to make sure your sketches are approximately correct.

1. $\overrightarrow{AB} \perp \overrightarrow{AC}$

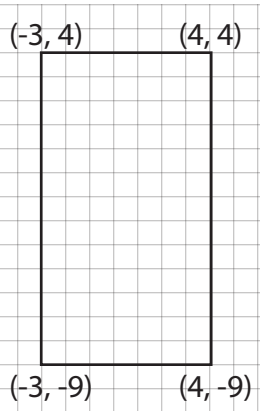
2. $PX = WC$

3. $\angle ABC \cong \angle NBC$

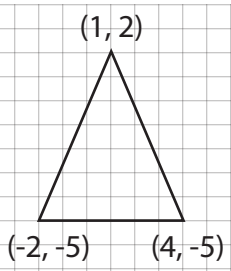
4. $\angle DBC$ is an inscribed angle that is about 45°

[D] Write the given transformation in mapping notation, and then sketch the image under the mapping. Label the coordinates of the vertices of the image.

1. down five units and left two units
   $(x, y) \rightarrow$ (_____, _____)



2. reflected horizontally and twice as tall
   $(x, y) \rightarrow$ (_____, _____)



[E] Point *A* is (2, 8), and point *B* is (4, -18). Using equations only, solve for the following.

1. the slope m of $\overleftrightarrow{AB}$

2. the y-intercept b of $\overleftrightarrow{AB}$

3. the equation of $\overleftrightarrow{AB}$

4. the midpoint D of $\overline{AB}$

[F] Bonus.

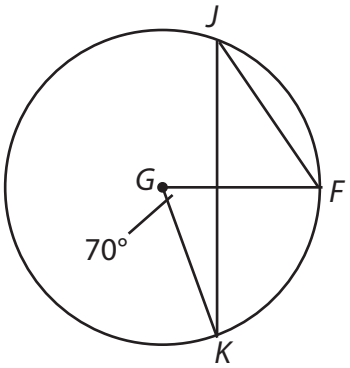
1. If an angle is drawn so that one side has a slope of zero, the TANGENT of the angle is the slope of the other side of the angle. Find or estimate the tangent of the following angles.

a) 45°

b) 30°

Name: **Math 2**

Date: **Review 3 Version C**



[A] Circle whether each statement is true or false.

T F 1. $m\angle KJF = 35°$

T F 1. All rectangles are similar.

T F 1. Every square is a rhombus.

T F 3. Point P cannot exist in two different locations.

T F 4. Each angle of a regular 18-sided polygon is 100°.

T F 5. The diagonals of a parallelogram bisect each other.

T F 2. The scale factor between two congruent figures is 1.

T F 3. For translations, an image is congruent to its pre-image.

T F 4. The letter "q" is a horizontal and vertical reflection of the letter "b".

T F 5. The scale factor from a circle of radius 11 to a circle of radius 52 is $\frac{52}{11}$.

T F 11. $\overline{NK}$ represents a line segment, and NK represents the length of a line segment.

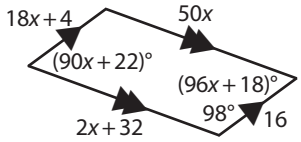
T F 6. A triangle with sides 25, 28, and 29 is similar to a triangle with sides 45, 48, and 49.

T F 7. If one cube is ¾ as wide as another, then its volume is ¾ • ¾ • ¾ times that of the first cube.

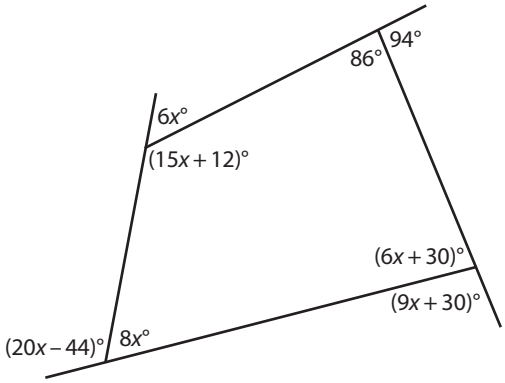
T F 8. A scale factor greater than 1 will enlarge a figure, and a scale factor less than 1 will shrink a figure.

[B] For each problem, write an equation different than what your partners have written, and solve it.

1.



2.



[C] Sketch the following. Use a ruler or protractor to make sure your sketches are approximately correct.

1. $\overrightarrow{AB} \perp \overrightarrow{CB}$

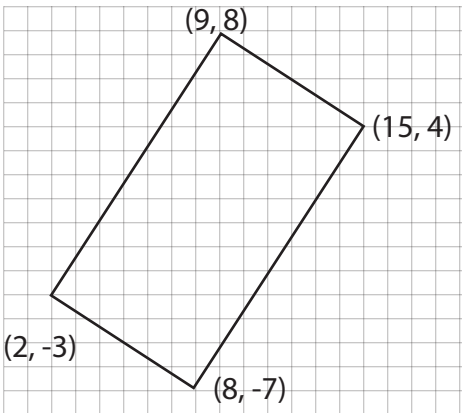
2. $PX = EX$

3. $\angle ABC \cong \angle ABN$

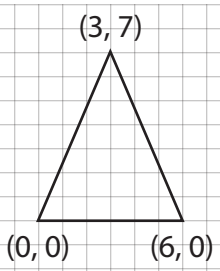
4. $\angle DBC$ is a circumscribed angle that is about 135°

[D] Write the given transformation in mapping notation, and then sketch the image under the mapping. Label the coordinates of the vertices of the image.

1. down five units and left two units
   $(x, y) \rightarrow$ (_____, _____)



2. reflected vertically and half as wide
   $(x, y) \rightarrow$ (_____, _____)



[E] Point *A* is (-1, 8), and point *B* is (4, -12). Using equations only, solve for the following.

1. the slope m of $\overleftrightarrow{AB}$

2. the y-intercept b of $\overleftrightarrow{AB}$

3. the equation of $\overleftrightarrow{AB}$

4. the midpoint D of $\overline{AB}$

[F] Bonus.

1. If an angle is drawn so that one side has a slope of zero, the TANGENT of the angle is the slope of the other side of the angle. Find or estimate the tangent of the following angles.

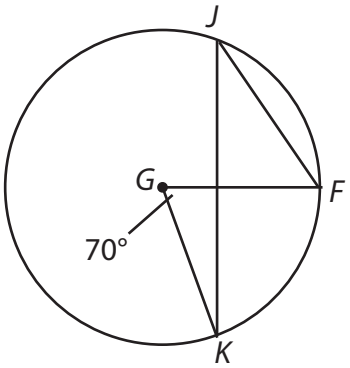
a) 60°

b) 135°

Name: **Math 2**

Date: **Review 3 Version D**

[A] Circle whether each statement is true or false.



T F 1. $m\angle KJF = 35°$

T F 1. All rectangles are similar.

T F 1. Every square is a rhombus.

T F 3. Point P cannot exist in two different locations.

T F 4. Each angle of a regular 18-sided polygon is 100°.

T F 5. The diagonals of a parallelogram bisect each other.

T F 2. The scale factor between two congruent figures is 1.

T F 3. For translations, an image is congruent to its pre-image.

T F 4. The letter "q" is a horizontal and vertical reflection of the letter "b".

T F 5. The scale factor from a circle of radius 11 to a circle of radius 52 is $\frac{52}{11}$.

T F 11. $\overline{NK}$ represents a line segment, and NK represents the length of a line segment.

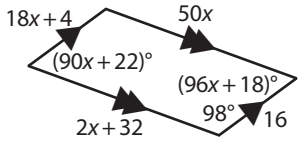
T F 6. A triangle with sides 25, 28, and 29 is similar to a triangle with sides 45, 48, and 49.

T F 7. If one cube is ¾ as wide as another, then its volume is ¾ • ¾ • ¾ times that of the first cube.

T F 8. A scale factor greater than 1 will enlarge a figure, and a scale factor less than 1 will shrink a figure.

[B] For each problem, write an equation different than what your partners have written, and solve it.

1.



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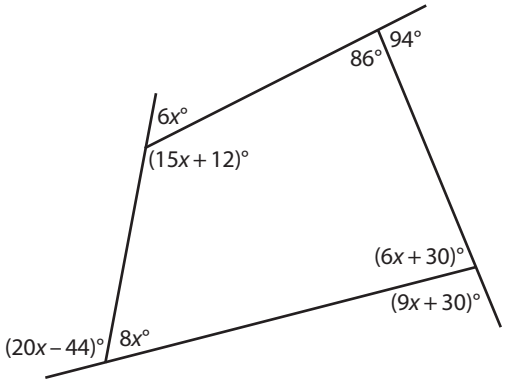


[C] Sketch the following. Use a ruler or protractor to make sure your sketches are approximately correct.

1. $\overrightarrow{RK} \perp \overrightarrow{VK}$

2. $PA = SA = NT$

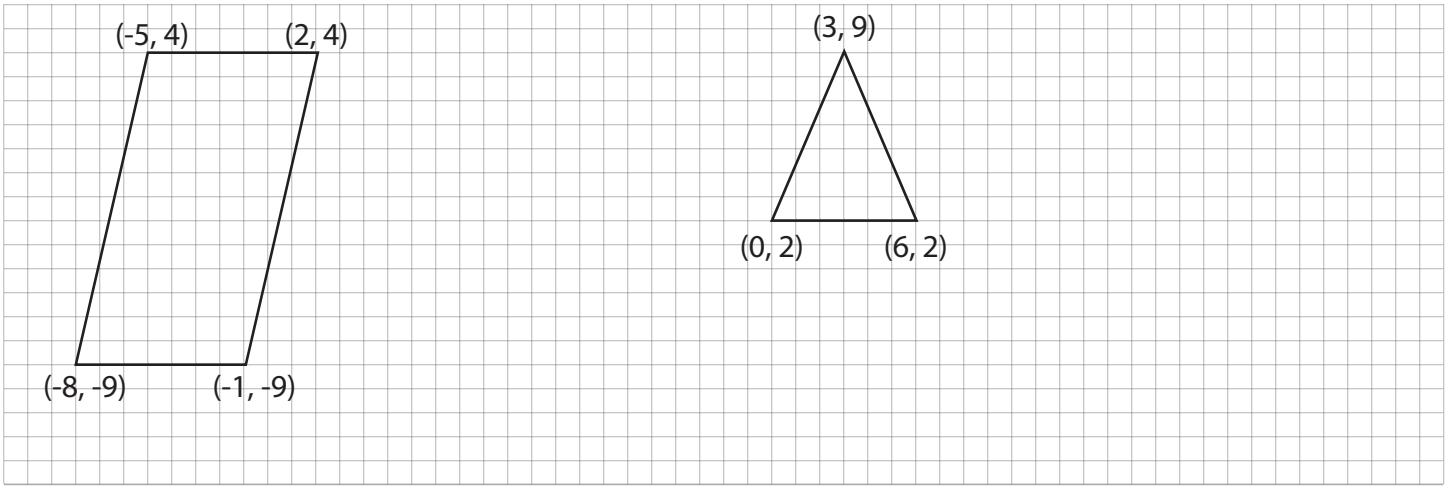
3. $\angle ABC \cong \angle ABD \cong \angle AST$

4. $\angle DBC$ is a circumscribed angle that is about 45°

[D] Write the given transformation in mapping notation, and then sketch the image under the mapping. Label the coordinates of the vertices of the image.

1. down five units and left two units
   $(x, y) \rightarrow$ (_____, _____)

2. left 2 units, then reflected horizontally
   $(x, y) \rightarrow$ (_____, _____)



[E] Point *A* is (2, 8), and point *B* is (-5, 18). Using equations only, solve for the following.

1. the slope m of $\overleftrightarrow{AB}$

2. the y-intercept b of $\overleftrightarrow{AB}$

3. the equation of $\overleftrightarrow{AB}$

4. the midpoint D of $\overline{AB}$

[F] Bonus.

1. If an angle is drawn so that one side has a slope of zero, the TANGENT of the angle is the slope of the other side of the angle. Find or estimate the tangent of the following angles.

a) 180°

b) 225°