شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

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مراجعة نهائية وفق الهيكل الوزاري - ريفيل

التواصل الاجتماعي بحسب الصف الثامن

روابط مواد الصف الثامن على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الثامن والمادة رياضيات في الفصل الثاني

1	الخطة الفصلية المسار العام - بريدج
2	دليل تصحيح أسئلة الامتحان الورقي - بريدج
3	دليل تصحيح أسئلة الامتحان الورقي - ريفيل
4	أسئلة الامتحان النهائي - بريدج
5	حل مراجعة نهائية وفق الهيكل الوزاري - ريفيل


رياضيات 2023
هيكل 8 ريفيل
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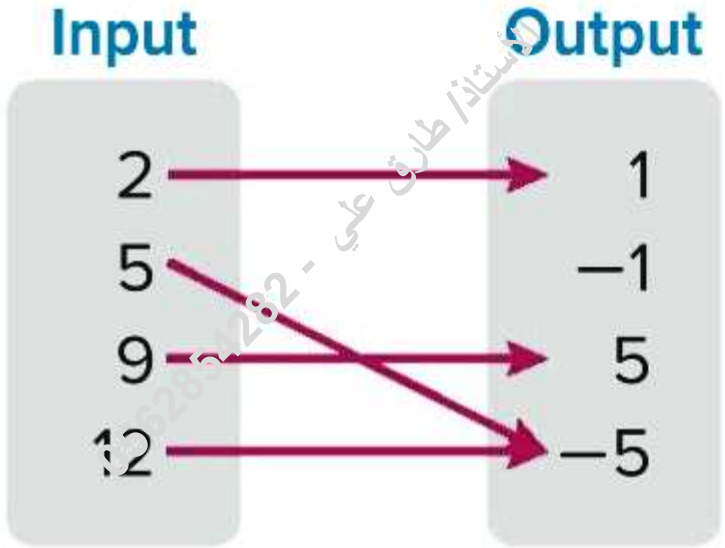
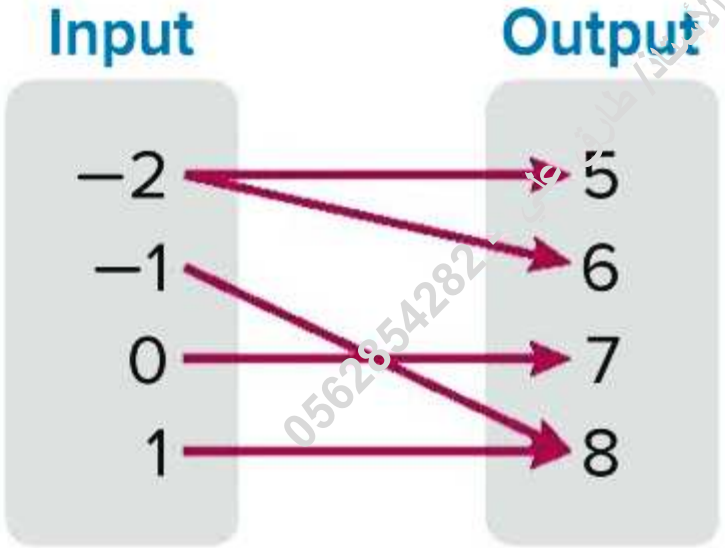
https://chat.whatsapp.com/D26wXMka8Gn45kpHLhaak0

Determine whether each relation is a function. Explain

1.



2.



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Determine whether each relation is a function. Explain

3.

Input, x	Output, y
−10	4
−5	4
0	4
5	4

4.

Input, x	Output, y
1	2
1	3
1	4
1	5

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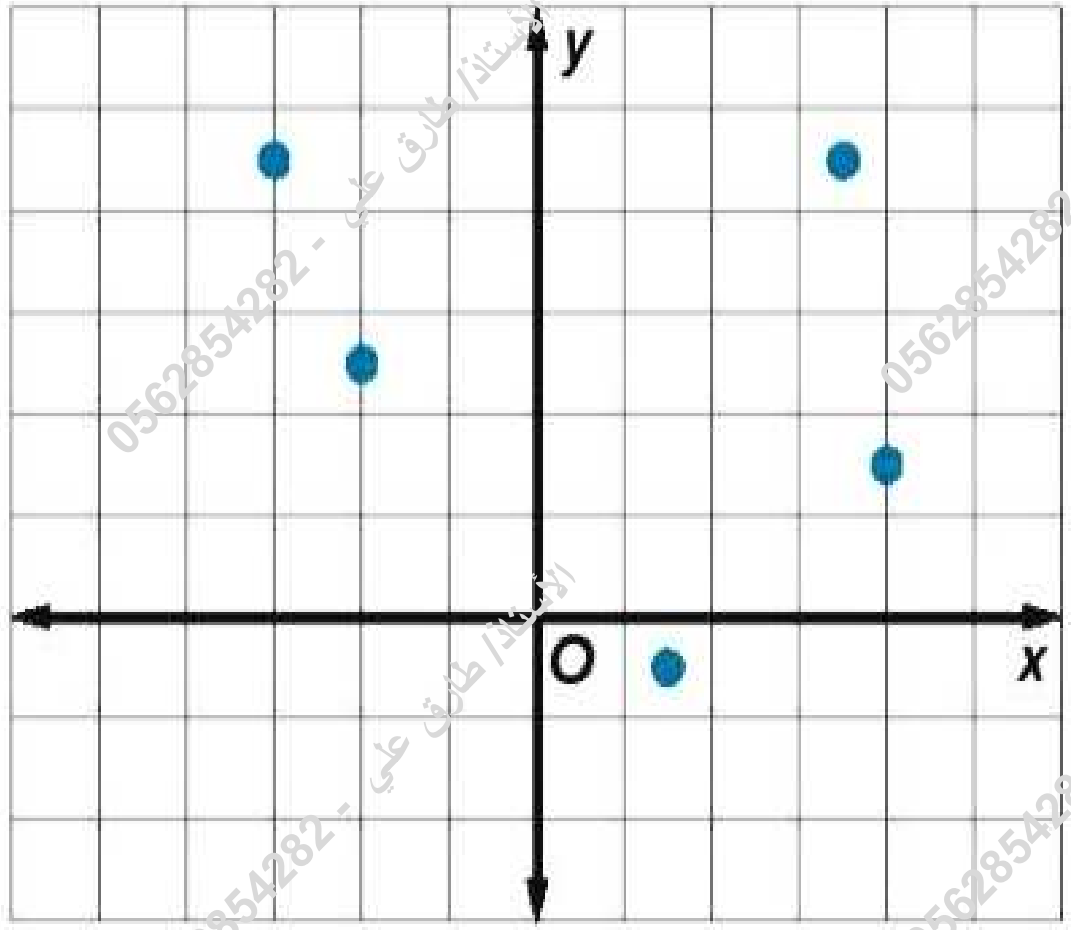
Determine whether each relation is a function. Explain

5.



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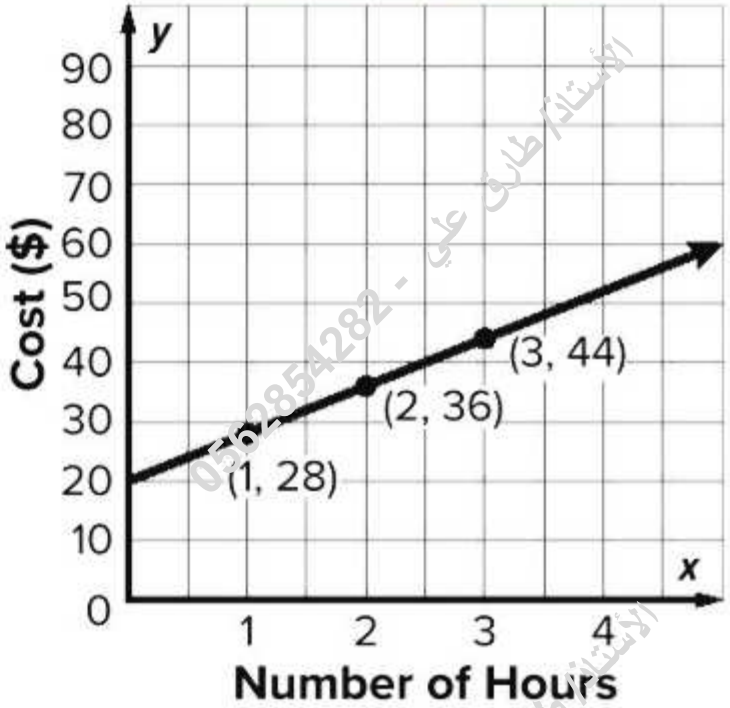
Write Your Steps

1. A cleaning service charges an initial fee plus an hourly rate. The total cost for different numbers of hours, including the initial fee, is shown on the graph. Find and interpret the rate of change and initial value. Then write the equation of the function in the form $y = mx + b$. (Example 1)



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Write Your Steps

2. The table shows the distance Penelope is from the park as she walks to soccer practice. Assume the relationship between the two quantities is linear. Find and interpret the rate of change and initial value. Then write the equation of the function in the form $y = mx + b$. (Example 2)

Time (min), x	Distance (m), y
5	1,930
10	1,380
15	830
20	280

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Write Your Steps

3. A roller skating rink charges a skate rental fee and an hourly rate to skate. The total cost to skate for 2 hours is $9.50 and for 5 hours is $18.50. Assume the relationship is linear. Find and interpret the rate of change and initial value. Then write the equation of the function in the form $y = mx + b$, where x represents the number of hours and y represents the total cost.

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Write Your Steps

4. **Open Response** A movie theater offers a reward program that charges a yearly membership fee and a discounted rate per movie ticket. The total cost for a reward program member to see 5 movies is $40 and the total cost for 12 movies is $75. Assume the relationship is linear. Write the equation of the function in the form $y = mx + b$, where x represents the number of movies and y represents the total cost.

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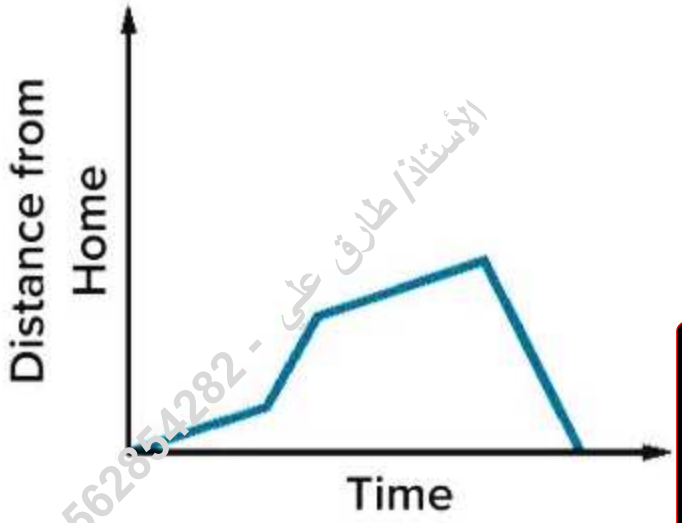
1. The graph displays the distance Wesley was from home as he ran in preparation for his cross-country meet. Describe the change in distance over time. (Example 1)



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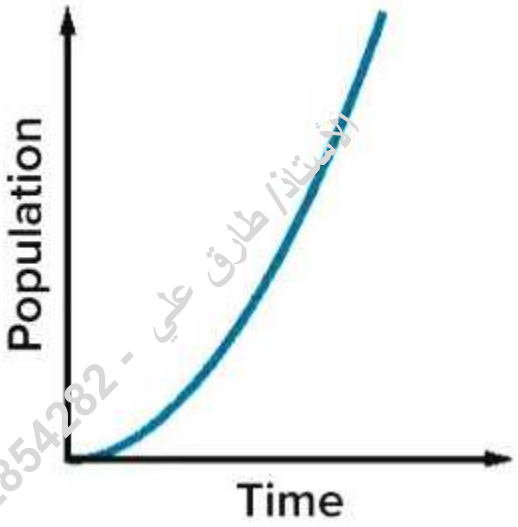
2. The graph displays the population of bacteria in a petri dish. Describe the change in population over time. (Example 1)



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3. Ryan's heart rate was steady before exercising. While exercising, his heart rate increased rapidly and then steadied. During cool down, his heart rate decreased slowly then lowered quickly until becoming steady again. Sketch a qualitative graph to represent the situation. Determine if the graph is linear or nonlinear and where the graph is increasing or decreasing.

(Example 2)

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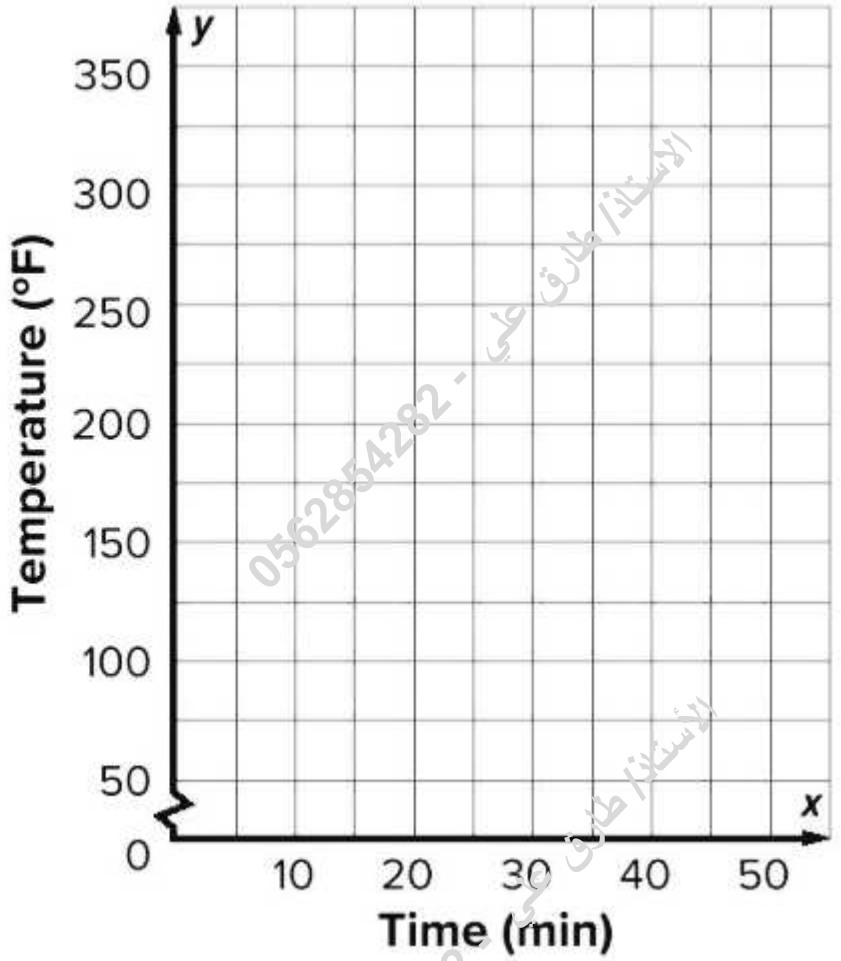
4. An oven is being preheated. The temperature starts at 75°F and increases at a constant rate for 8 minutes until it reaches the desired temperature, 350°F. It remains the same temperature for 27 minutes. Then the temperature decreases at a constant rate for 5 minutes until it reaches 175°, where it remains steady to keep the food warm. Sketch a graph to represent the situation.

(Example 3)



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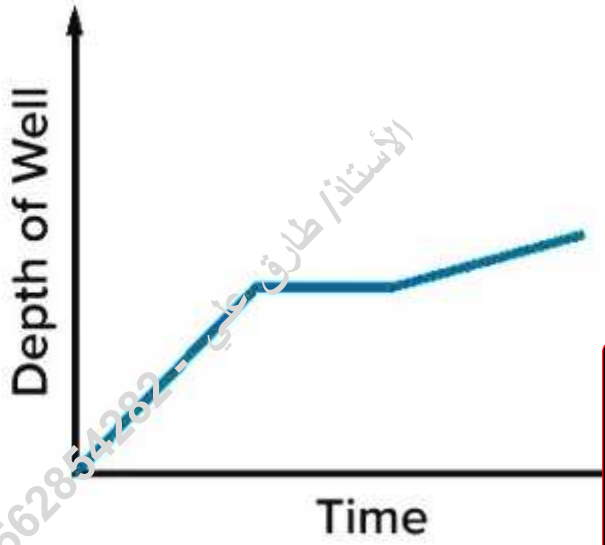
5. **Open Response** A well is being dug on a piece of land. The graph displays the depth of the well over time. Describe the change in the depth of the well over time.



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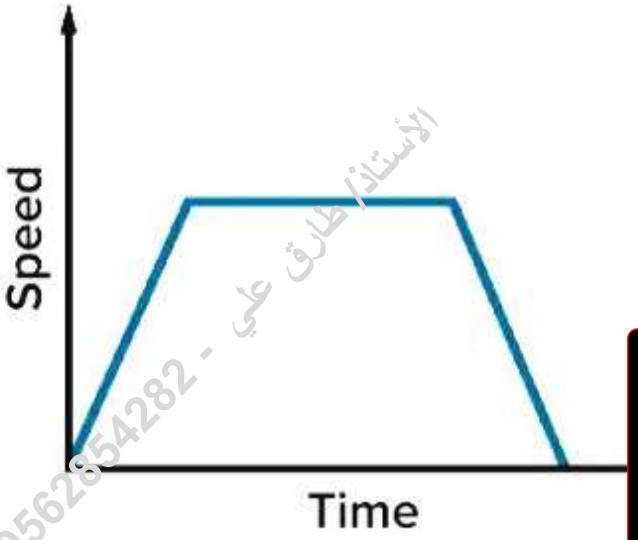
6. **Persevere with Problems** The graph shows the speed of a train as time increases. Draw a graph and describe how the distance of the train changes as time increases.



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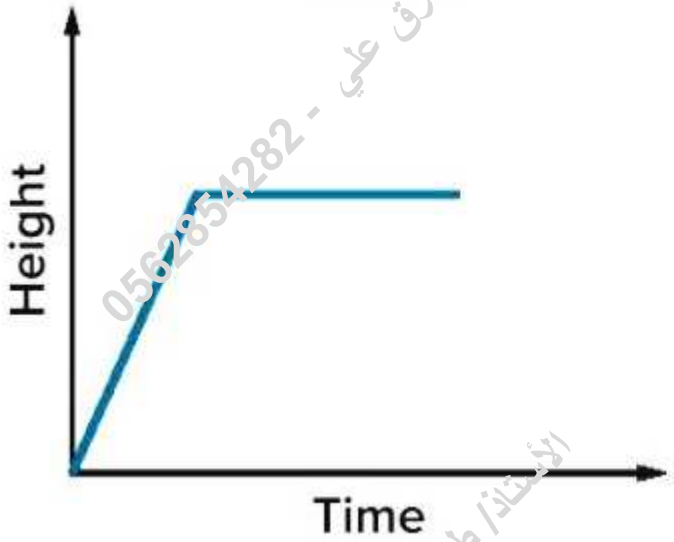
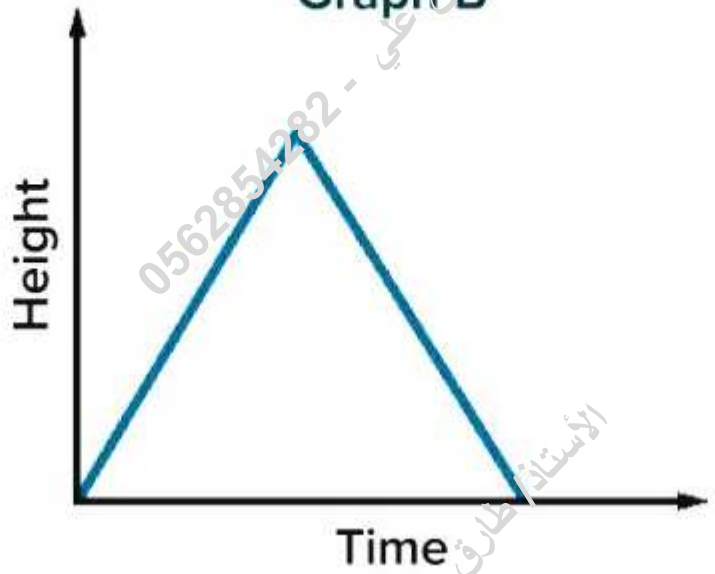
7. A plant grows steadily until it reaches its full height, at which time it stops growing. Which graph displays this relationship? Explain your reasoning.

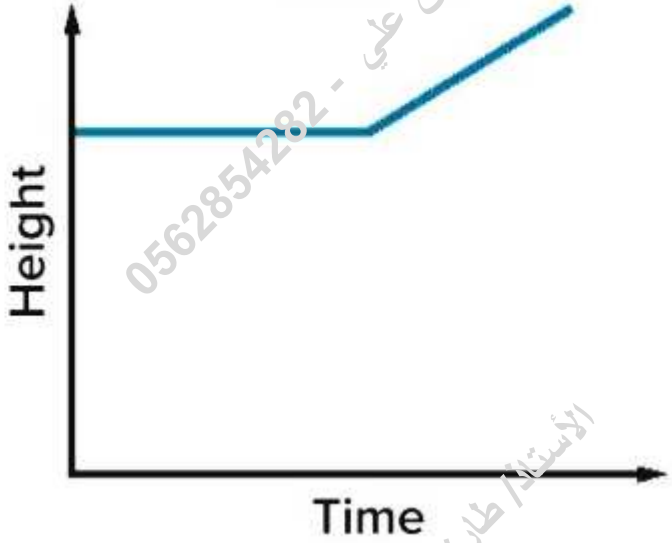
Graph A



Graph B



Graph C



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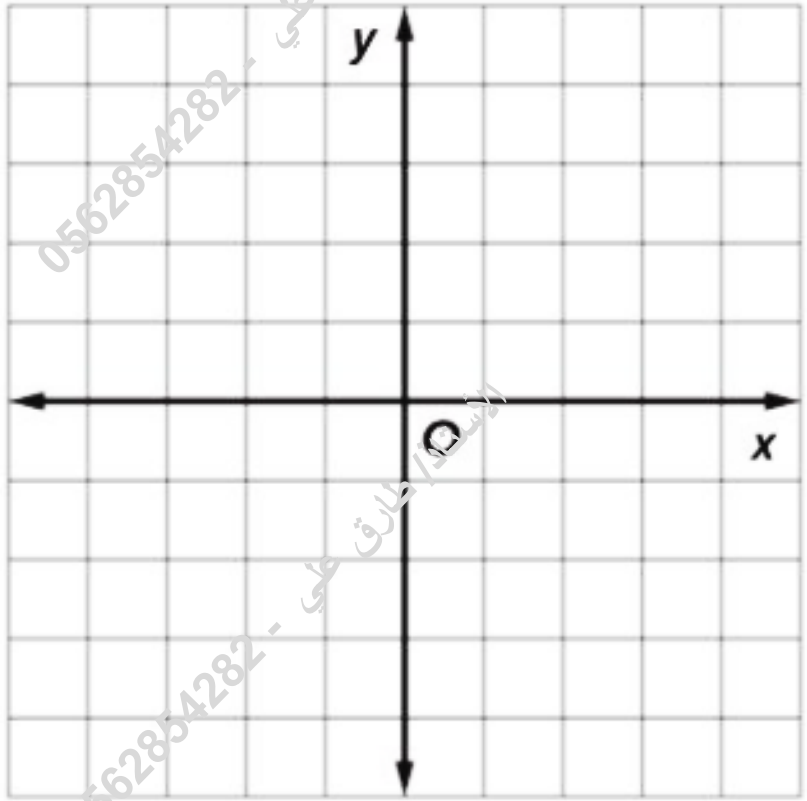
Solve each system of equations by graphing. Check the solution.

1. $y = x + 4$
   $y = -2x - 2$



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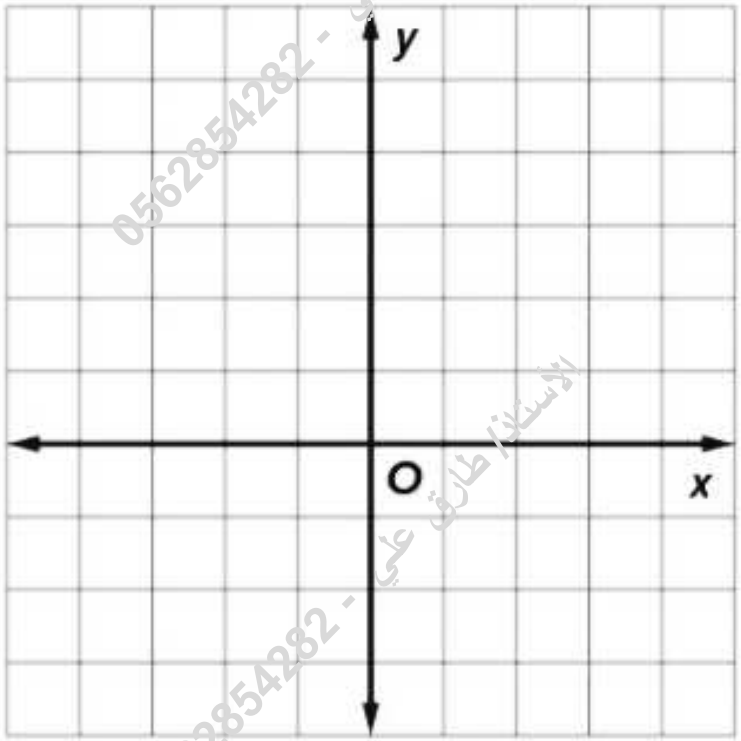
Solve each system of equations by graphing. Check the solution.

2. $y - \frac{1}{2}x = -1$

$y = \frac{1}{2}x + 4$



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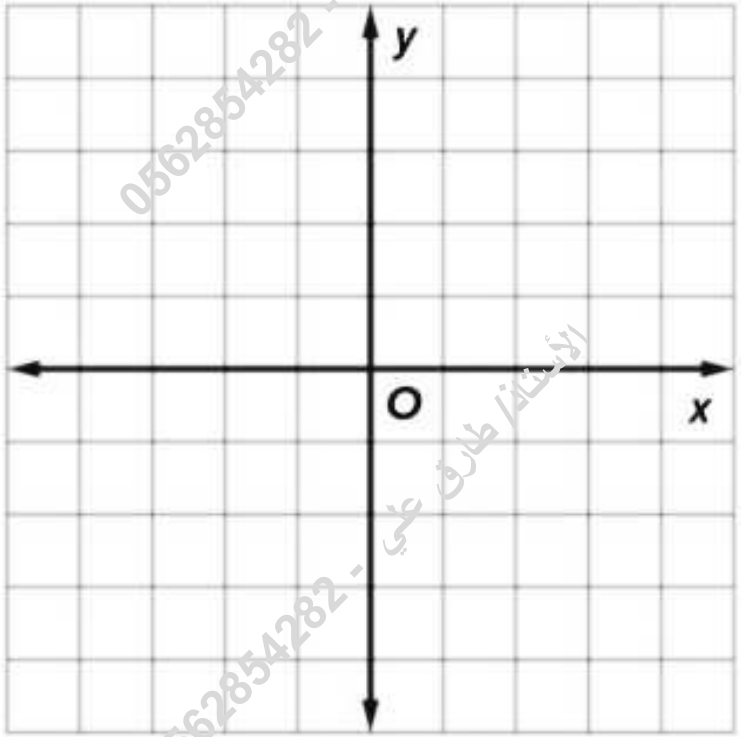
Solve each system of equations by graphing. Check the solution.

3. $y + \frac{1}{4}x = 1$

$y = -\frac{1}{4}x + 1$



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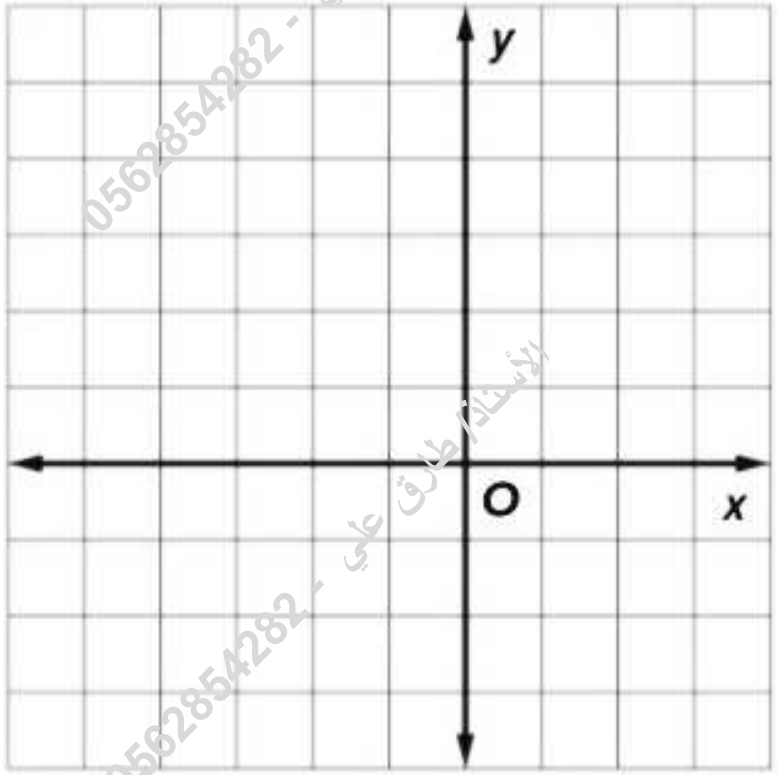
Solve each system of equations by graphing. Check the solution.

4. $x = -3$
   $y = 5$



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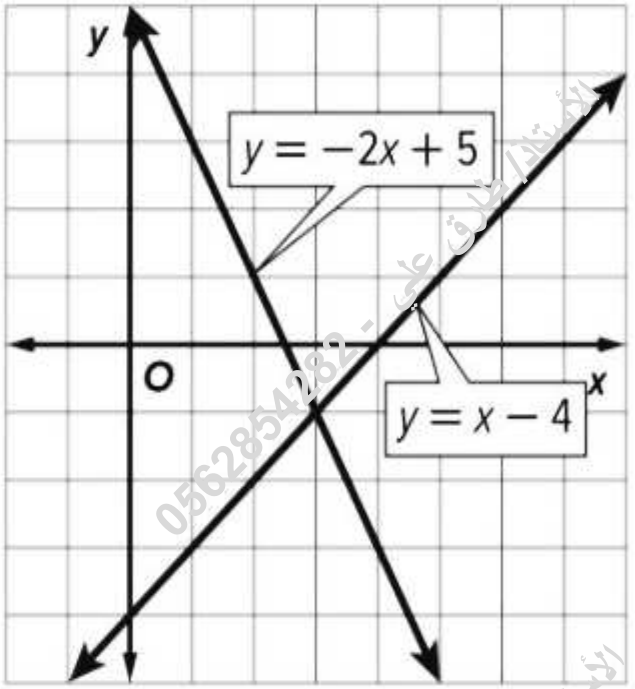
5. **Grid** The graph of a system of equations is shown. Plot and label the solution of the system on the graph.



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Determine if each system of equations has *no solution*, *one solution*, or *an infinite number of solutions.* (Examples 1–3)

1. $-5x + y = -1$
$-5x + y = 10$

2. $y = -4x + 9$
$y = \frac{2}{3}x - 5$

3. $y + 1 = 3x$
$2y = 6x - 2$

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Determine if each system of equations has *no solution*, *one solution*, or *an infinite number of solutions.* (Examples 1–3)

4. $y = -\frac{4}{5}x$

$4x + 5y = 0$

5. $y = \frac{1}{2}x + 6$

$2y = x - 8$

6. $y = -2x$

$y = x + 3$

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Solve each system of equations by elimination. Check the solution.

1. $-6x + y = -3$
   $5x - 2y = -8$

2. $-3x + 12y = 18$
   $-6x + 24y = 36$

3. $-5x - 2y = -12$
   $3x + 2y = 8$

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Solve each system of equations by elimination. Check the solution.

4. $5x + 5y = -10$
$2x - 3y = -9$

5. $x + 3y = 6$
$x - 3y = 12$

6. $6x + 4y = 6$
$6x + 2y = 12$

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Solve each system of equations by elimination. Check the solution.

7. $3x - 5y = 11$
$x - 4y = -8$

8. $-18x + 6y = -6$
$-24x + 6y = -18$

9. $-4x - 8y = 8$
$3x - 5y = 16$

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10. Solve the system of equations by elimination.

$$y = -\frac{1}{3}x - 5$$

$$\frac{1}{3}x + 5y = -9$$

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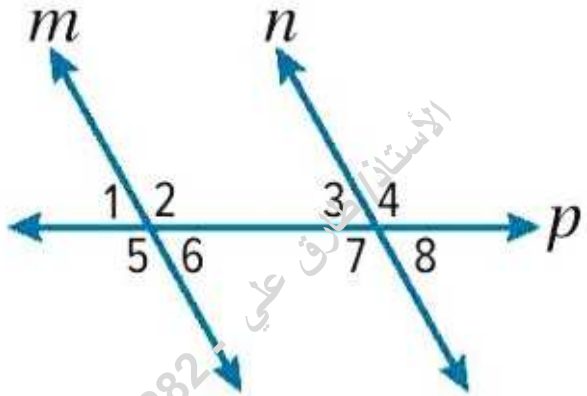
For Exercises 1–4, use the figure at the right. In the figure, line *m* is parallel to line *n*. For each pair of angles, classify the relationship in the figure as *alternate interior*, *alternate exterior*, or *corresponding*. (Examples 1 and 2)



1. ∠2 and ∠7
2. ∠1 and ∠3
3. ∠4 and ∠5
4. ∠5 and ∠7

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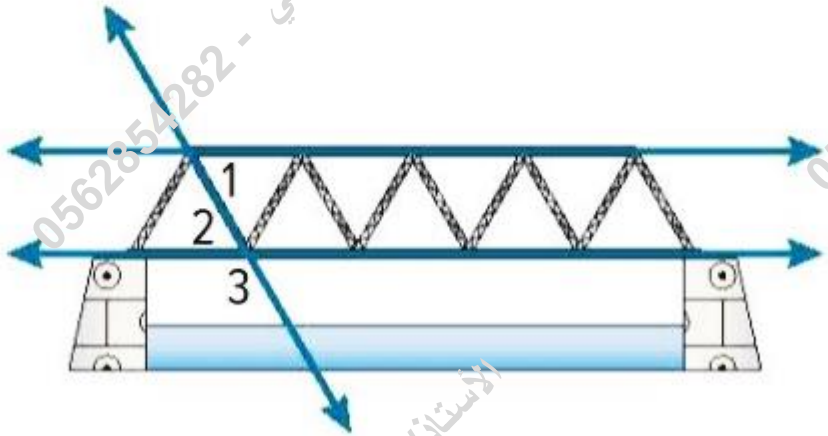
5. Arturo is designing a bridge for science class using parallel supports for the top and bottom beam. Find $m\angle 2$ and $m\angle 3$ if $m\angle 1 = 60°$. Justify your answer. (Example 3)



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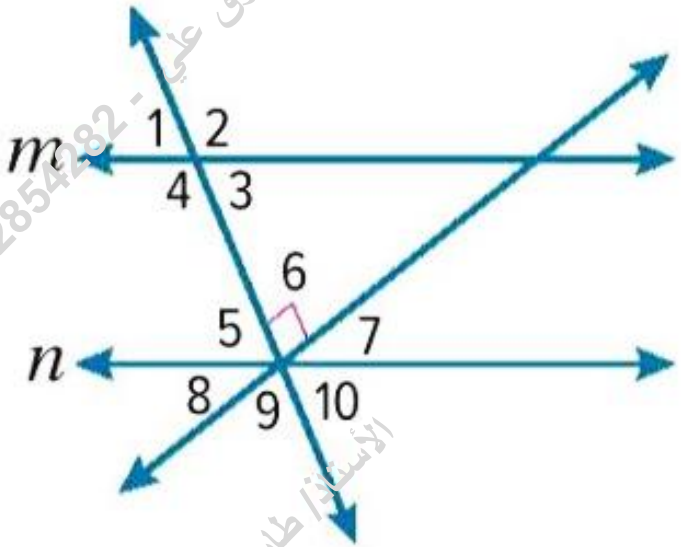
6. In the figure, line m is parallel to line n. The measure of $\angle 3$ is 58°. What is the measure of $\angle 7$? (Example 4)



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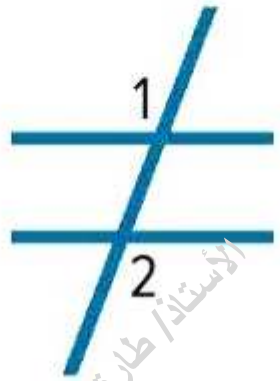
7. The symbol below is an equal sign with a slash through it. It is used to represent *not equal to* in math, as in $x \neq 5$. If $m\angle 1 = 108°$, classify the relationship between $\angle 1$ and $\angle 2$. Then find $m\angle 2$. Assume the equal sign consists of parallel lines.



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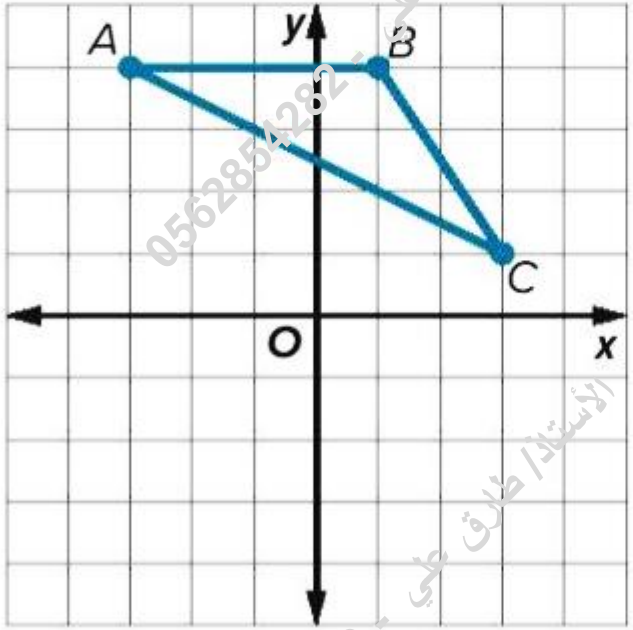
1. The graph of $\triangle ABC$ is shown. Graph the image of $\triangle ABC$ after a reflection across the x-axis. Write the coordinates of the reflected image. (Example 1)



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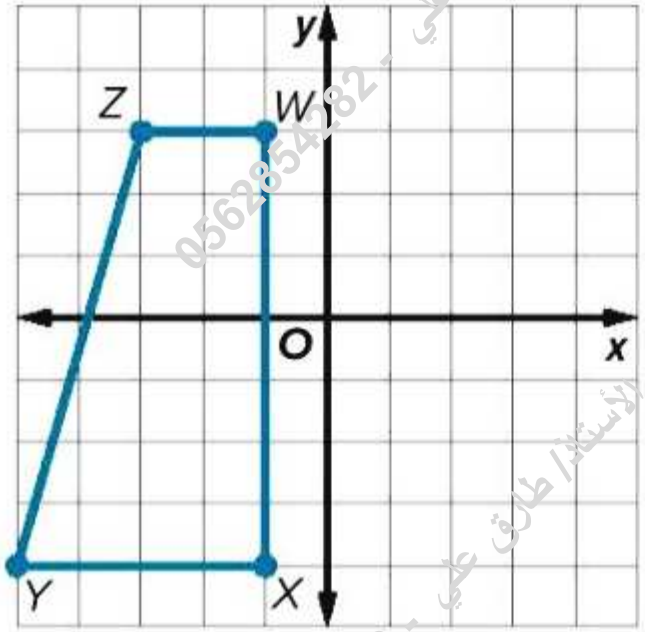
2. The graph of trapezoid *WXYZ* is shown. Graph the image of *WXYZ* after a reflection across the *y*-axis. Write the coordinates of the reflected image. (Example 1)



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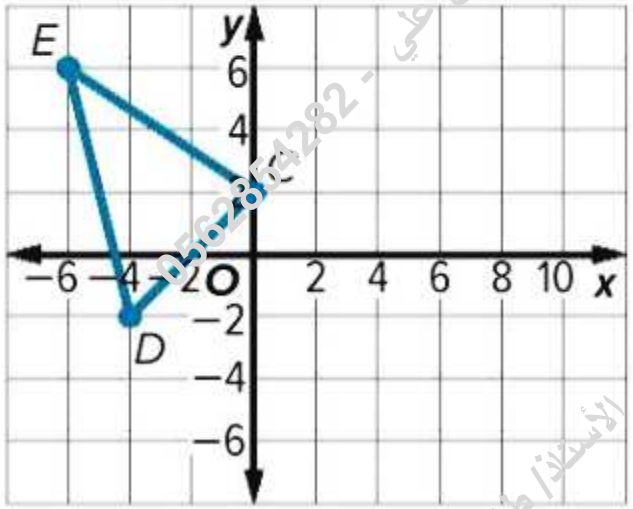
3. The graph of $\triangle CDE$ is shown. Graph the image of $\triangle CDE$ after a reflection across the line $x = 2$. Include the line of reflection. Then write the coordinates of the image. (Example 2)



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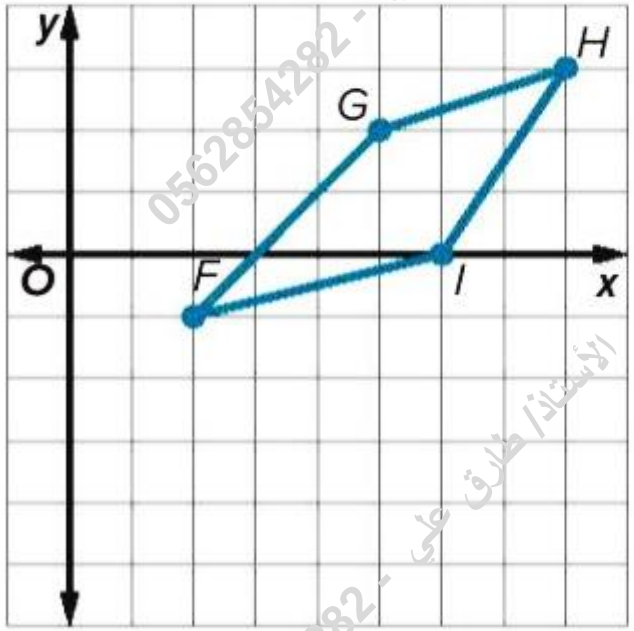
4. The graph of polygon *FGHI* is shown. Graph the image of *FGHI* after a reflection across the line $y = -1$. Include the line of reflection. Then write the coordinates of the image.

(Example 2)



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5. Triangle TUV has coordinates $T(0, 3)$, $U(-3, 0)$, and $V(-4, 4)$. The triangle is reflected across the y-axis. Write the coordinate notation for a reflection across the y-axis. Then, write the coordinates of $\triangle T'U'V'$. (Example 3)

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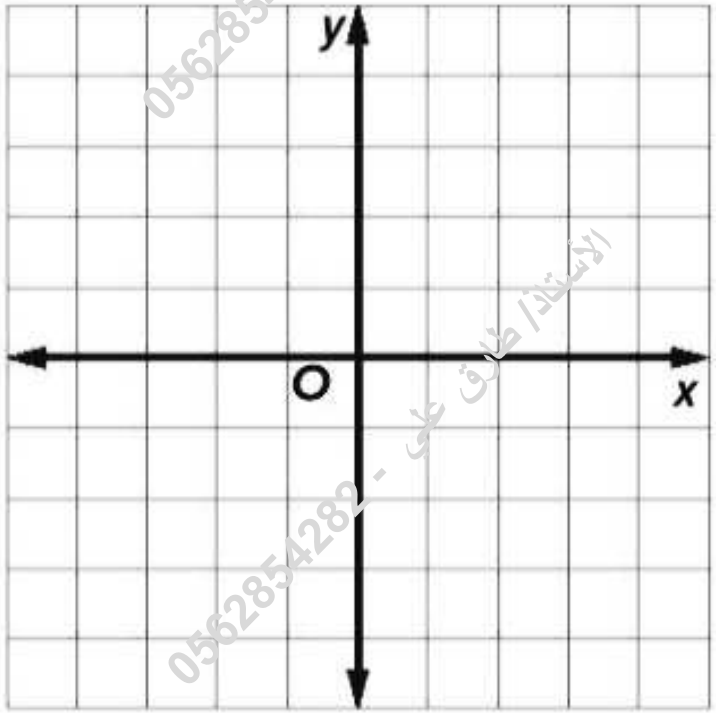
1. Polygon $EFGH$ has vertices $E(-1, 3)$, $F(1, 4)$, $G(3, 3)$, and $H(0, 0)$. Graph the figure and its image after a clockwise rotation of 90° about vertex H. Then write the coordinates of polygon $E'F'G'H'$. (Example 1)



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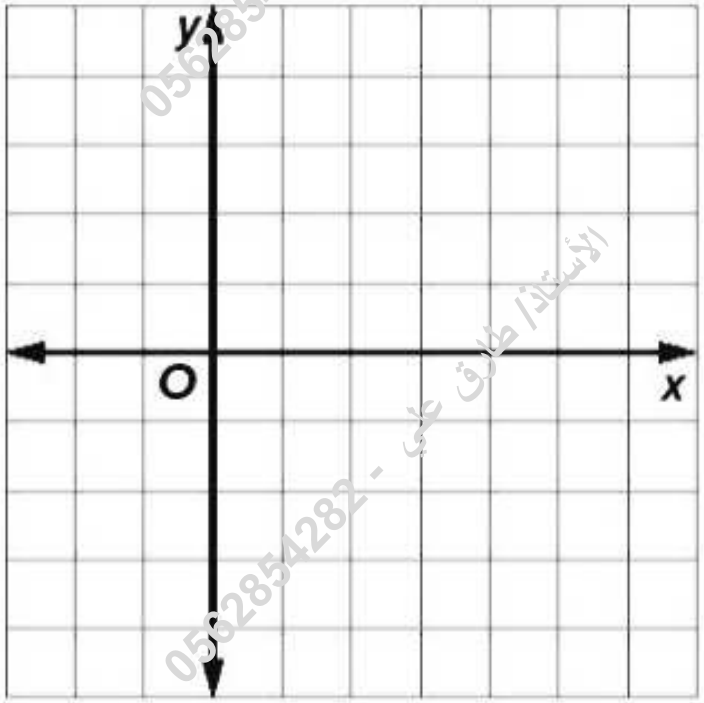
2. Triangle XYZ has vertices $X(-2, -1)$, $Y(0, 2)$, and $Z(2, -1)$. Graph the figure and its image after a clockwise rotation of 180° about vertex Z. Then write the coordinates of $\triangle X'Y'Z'$. (Example 1)



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Triangle QRS has vertices $Q(-2, 2)$, $R(-3, -4)$, and $S(1, -2)$. Write the coordinate notation for each rotation given. Then write the coordinates of $\triangle Q'R'S'$ after each rotation. (Example 2)

3. clockwise rotation of 180° about the origin

4. clockwise rotation of 270° about the origin

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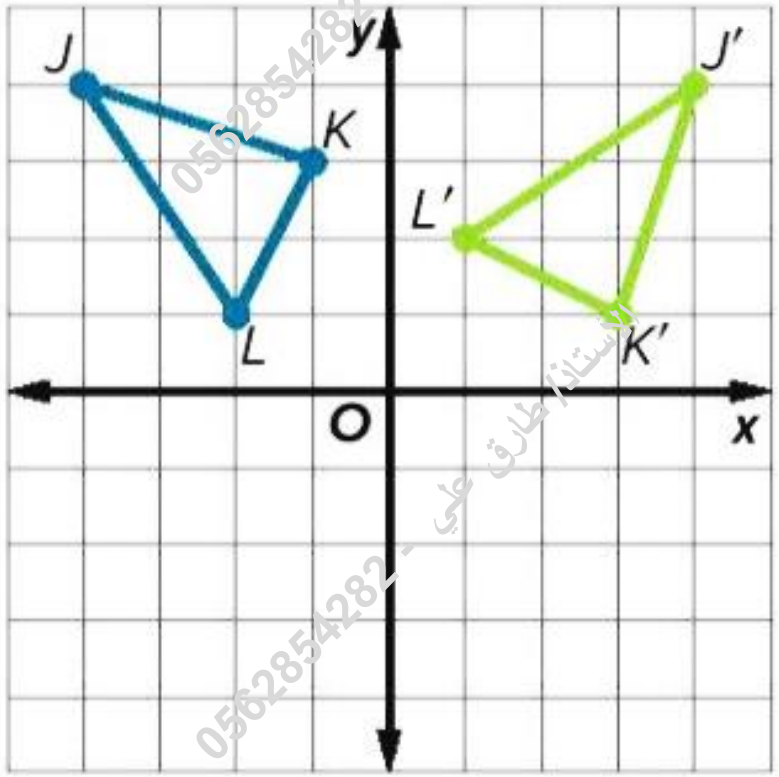
5. Use coordinate notation to describe the rotation. Then determine the angle of rotation. Assume the rotation is clockwise about the origin. (Example 3)



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Complete the function table for each function given.

1. $y = 2.5x - 8$

Input, x	Output, y
−5	
0	
5	
10	

2. $y = -5x - 1$

Input, x	Output, y
−2	
−1	
0	
1	

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Complete the function table for each function given.

3. $y = \frac{1}{2}x + 3$

Input, x	Output, y
-2	
2	
6	
10	

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4. A single-engine plane can travel up to 140 miles per hour. The total number of miles m is represented by the function $m = 140h$, where h is the number of hours traveled. Determine appropriate input values for this situation. Then complete the function table for $m = 140h$. (Example 2)

Input, h	Output, m

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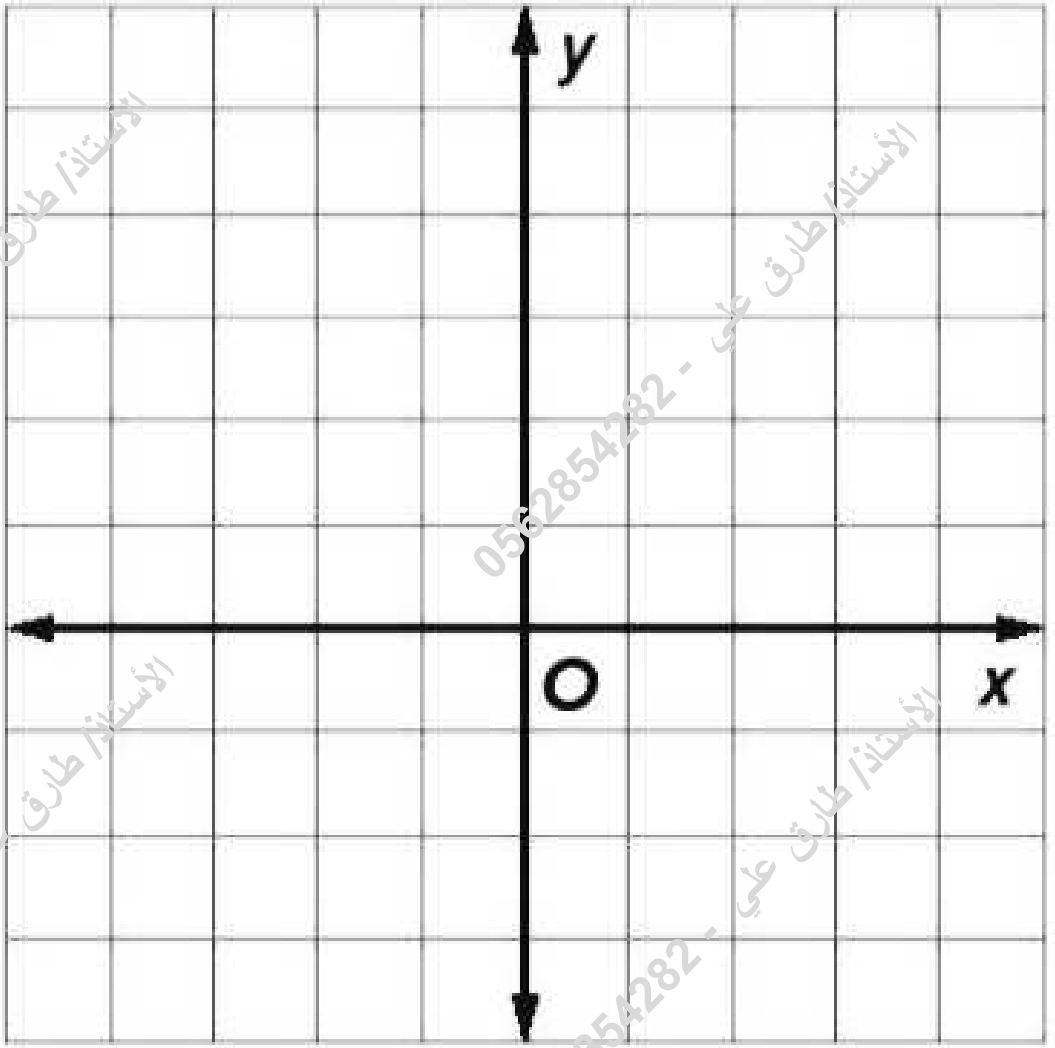
5. Create a function table for the function $y = -2x + 1$. Then graph the function.

(Example 3)

Input, x	Output, y
-2	
-1	
0	
1	



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6. Multiselect Select all of the possible types of numbers that are appropriate input values for the given situation.

A flower-delivery service charges $39.95 per flower arrangement and $2.99 for delivery. The total cost y is represented by the function $y = 39.95x + 2.99$, where x is the number of flower arrangements.

- ☐ whole numbers
- ☐ integers
- ☐ rational numbers
- ☐ positive integers
- ☐ negative numbers
- ☐ only zero

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1. Gennaro is considering two job offers as a part-time sales person. Company A will pay him $12.50 for each item he sells, plus a base salary of $500 at the end of the month. The amount Company B will pay him at the end of the month is shown in the table. Compare the functions' initial values and rates of change. Then determine how much more Gennaro would make at Company A if he sells 28 items by the end of the month. (Example 1)

Number of Items Sold, x	Total Earned ($), y
5	425
10	500
15	575

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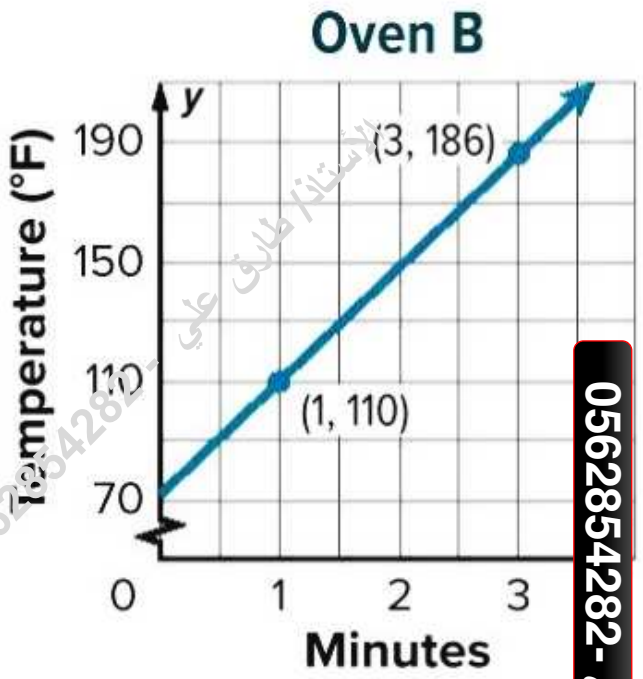
2. The temperature in two different ovens increased at a steady rate. The temperature in oven A is represented by the equation $y = 25x + 72$, where x represents the number of minutes and y represents the temperature in degrees Fahrenheit. The temperature of oven B is shown in the graph. Compare the functions' initial values and rates of change. Then determine how much greater the temperature in oven B will be than oven A after 8 minutes. (Example 1)



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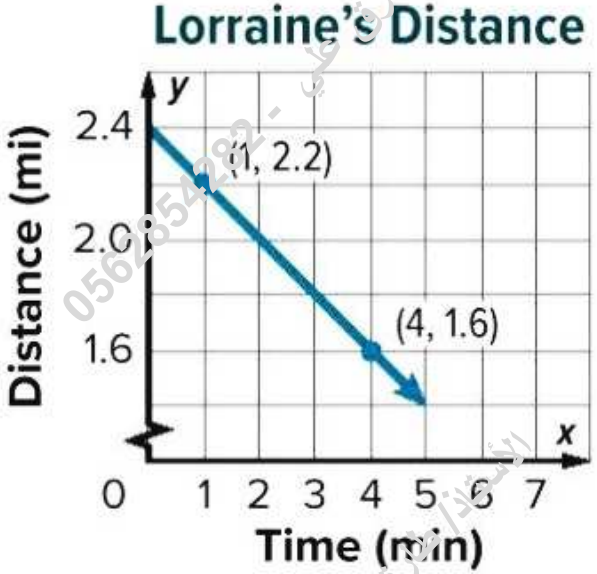
3. Open Response Lorraine and Chila were riding their bikes to school. Lorraine's distance away from the school is shown in the graph. Chila's distance away from the school is shown in the table. Compare the functions' initial values and rates of change. Then determine Lorraine's and Chila's distance from school after 7 minutes. (Example 2)



Chila's Distance	
Time (min), x	Distance (mi), y
1	1.5
2	1.3
3	1.1

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Solve each system of equations by substitution. Check the solution.

1. $y = x - 14$
   $y = -6x$

2. $x - y = -5$
   $x - y = \frac{1}{3}$

3. $y + 7 = 2x$
   $2y = 4x - 14$

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Solve each system of equations by substitution. Check the solution.

4. $y - 6x = 12$
$y = 6x + 5$

5. $y = 3x - 7$
$4x + y = -14$

6. $y = -6x + 8$
$2y + 12x = 16$

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Solve each system of equations by substitution. Check the solution.

7. $-3x + 4y = 6$
$-x + 2y = 8$

8. $y + 11 = 2x$
$3y - 6x = -33$

9. $9x + y = 9$
$y + 9x = 5$

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10. Solve the system of equations by substitution.

$$y = \frac{1}{4}x - 1$$

$$2y = \frac{2}{3}x + 6$$

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Write Your Steps

Find the value of x in each object.

1.

2.

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Write Your Steps

3. In $\triangle FGH$, the measures of angles F, G, and H, respectively, are in the ratio 4:4:10. Find the measure of each angle. (Example 2)

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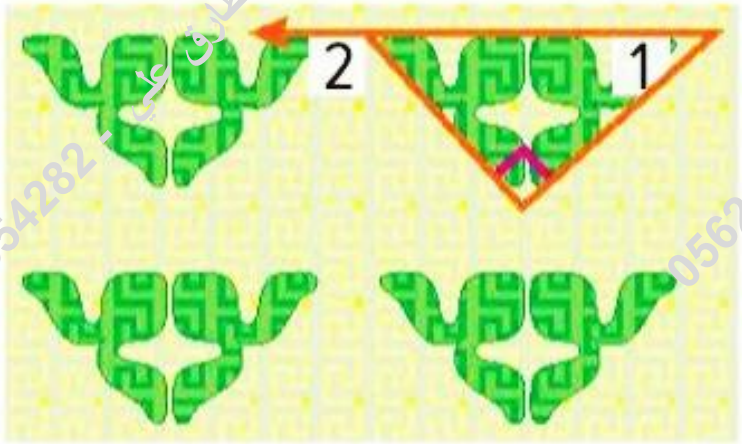
Write Your Steps

4. In the knitting pattern, $m\angle 1 = 42°$. Find the measure of $\angle 2$. (Example 3)



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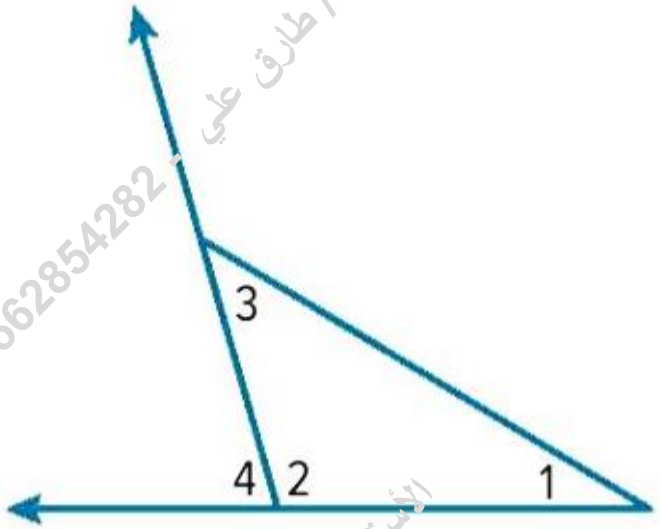
Write Your Steps

5. In the figure, $m\angle 4 = 74°$ and $m\angle 3 = 43°$. Find the measures of $\angle 1$ and $\angle 2$. (Example 4)



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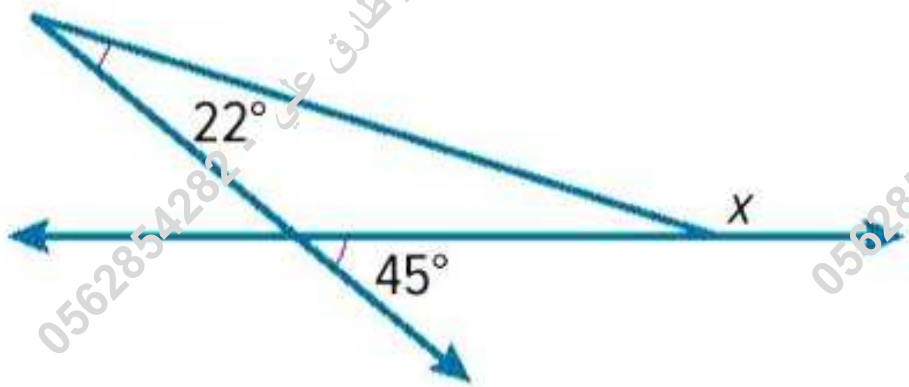
Write Your Steps

6. Open Response What is the measure of $\angle x$, in degrees, in the figure shown?



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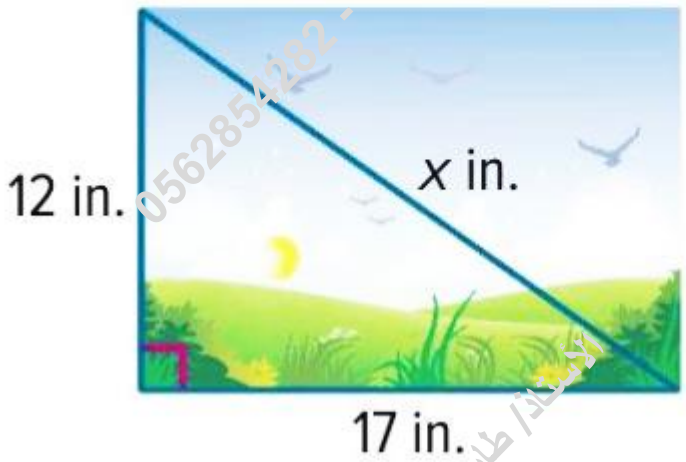
1. What is the length of a diagonal of a rectangular picture whose sides are 12 inches by 17 inches? Round to the nearest tenth. (Example 1)



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2. How far is the airplane from the runway? Round to the nearest tenth. (Example 2)

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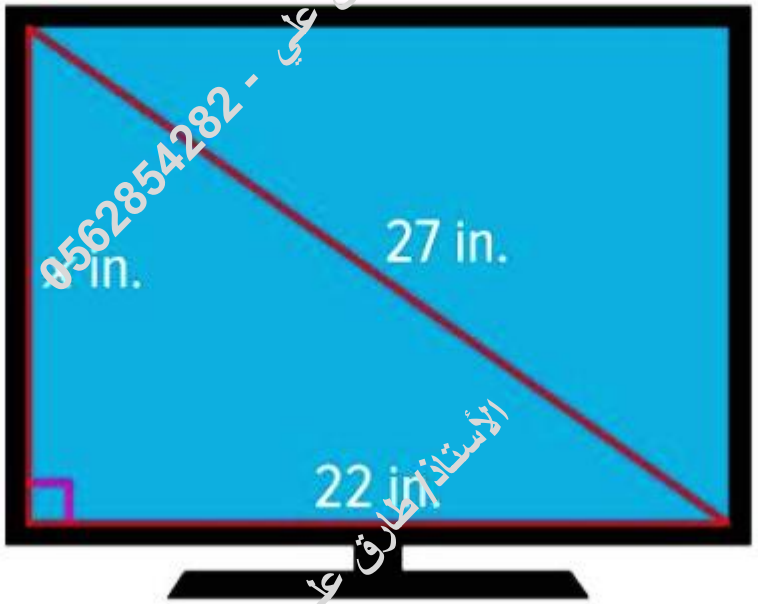
3. The diagonal of a television measures 27 inches. If the width is 22 inches, calculate its height to the nearest inch. (Example 3)



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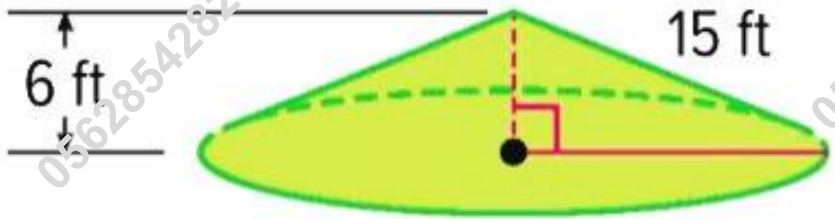
4. The distance from the top of the cone to the edge is 15 feet. The height of the cone is 6 feet. What is the radius of the cone? Round to the nearest tenth. (Example 4)



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5. What is the perimeter of a right triangle if the hypotenuse is 15 centimeters and one of the legs is 9 centimeters?

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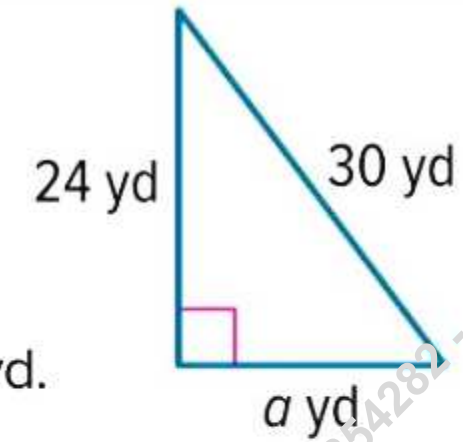
6. Multiselect Select all of the following statements that are true about the right triangle shown.



- ☐ The hypotenuse is 30 yd.
- ☐ The missing leg is 18 yd.
- ☐ The missing leg is 24 yd.
- ☐ The formula $24^2 + a^2 = 30^2$ can be used to find the missing leg measure.
- ☐ The formula $30^2 + a^2 = 24^2$ can be used to find the missing leg measure.

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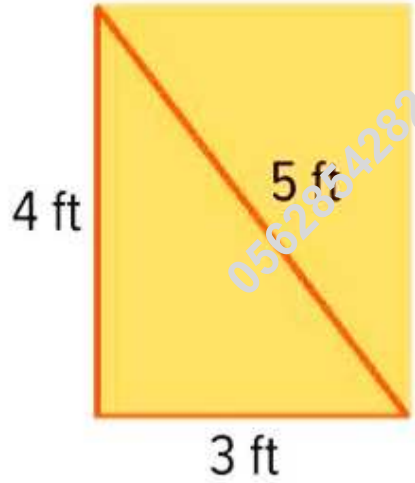
1. Three cities form a triangle. Tom measures the distances between the three cities on a map. The distances between the three cities are 45 miles, 56 miles, and 72 miles. Is the triangle formed by the three cities a right triangle? (Examples 1 and 2)

2. A carpenter is measuring a cabinet to ensure the sides create a right angle. Determine whether the triangle is a right triangle. (Examples 1 and 2)



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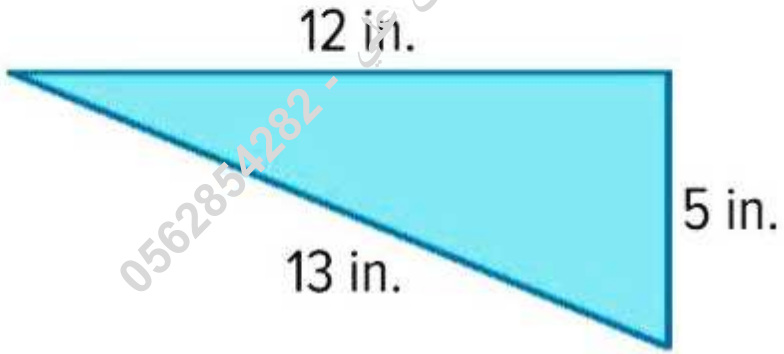
3. Allie wants to make sure that the pieces of cloth for a costume are right triangles. Determine whether the triangle is a right triangle. (Examples 1 and 2)



4. In order to ensure that the roof consists of right angles, an architect measures the diagonal to create a triangle. If the dimensions of the triangle are 9.5 feet, 16 feet, and 18.5 feet, is the triangle a right triangle? (Examples 1 and 2)

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5. Elyse is building a square raised-bed garden with 4-foot sides. She measured the diagonal to be $4\sqrt{2}$ feet. Is her garden square? Explain.

6. The distance between each base on a softball field is 60 feet. Maddie is placing the bases and measures the distance between home plate and second base. She determines the distance to be 80 feet. Are the bases at right angles? Explain.

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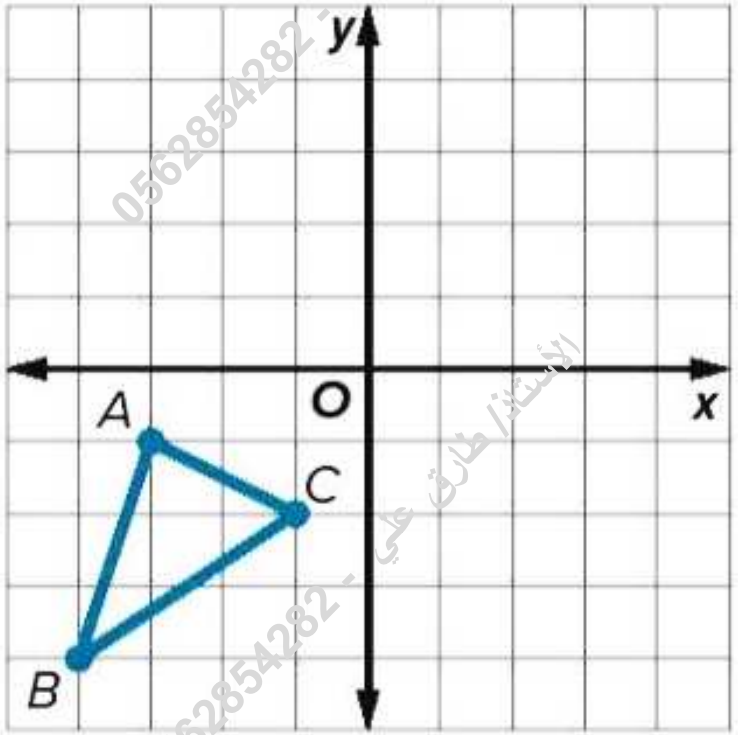
1. The graph of $\triangle ABC$ is shown. Graph the image of $\triangle ABC$ after a translation of 4 units right and 1 unit up. Write the coordinates of the image. (Example 1)



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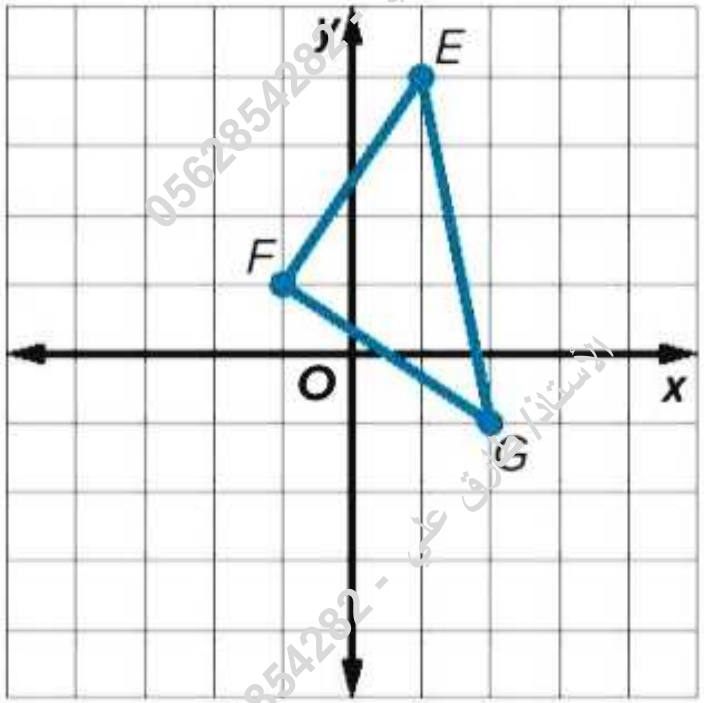
2. The graph of $\triangle EFG$ is shown. Graph the image of $\triangle EFG$ after a translation of 3 units left and 1 unit down. Write the coordinates of the image. (Example 1)



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Triangle QRS has vertices $Q(-2, 2)$, $R(-3, -4)$, and $S(1, -2)$. Write the coordinate notation for each translation given. Then write the coordinates of $\triangle Q'R'S'$ after each translation. (Example 2)

3. 7 units right and 4 units down

4. 2 units left and 3 units up

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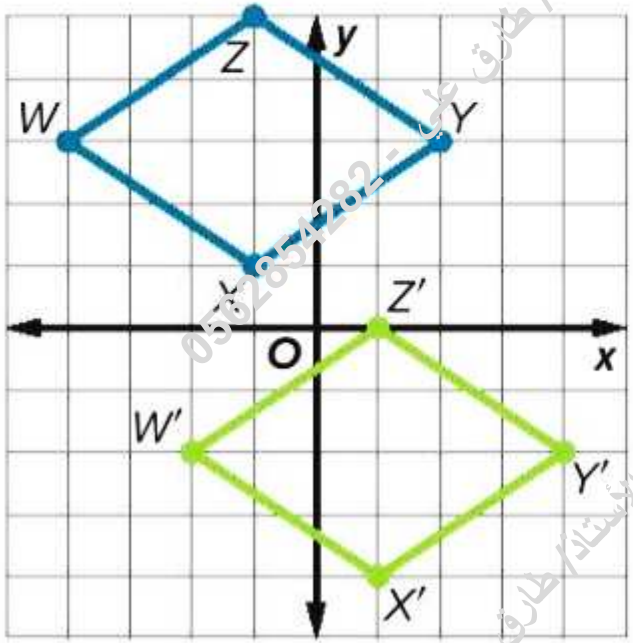
5. The preimage and image of $WXYZ$ are shown. Use coordinate notation to describe the translation. (Example 3)



6. Open Response Triangle JKL has vertices $J(-2, 2)$, $K(-3, -4)$, and $L(1, -2)$. Write the coordinate notation for a translation of 8 units right and 1 unit up.

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Write and solve a system of equations that represents each situation. Interpret the solution. (Examples 1–4)

Write Your Steps

1. The sum of two numbers is 20.5. Their difference is 6.5. Find the two numbers.

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Write and solve a system of equations that represents each situation. Interpret the solution. (Examples 1–4)

Write Your Steps

2. Tadeo volunteered at the library 6 times as many hours over the weekend as Dylan. Together, they volunteered a total of 14 hours. How many hours did each person volunteer over the weekend?

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Write and solve a system of equations that represents each situation. Interpret the solution. (Examples 1–4)

Write Your Steps

3. Tiana placed two orders for flowers and bushes. The first order was for 24 flowers and 6 bushes. The total of the first order was $144. The second order was for 18 flowers and 3 bushes. The total of the second order was $90. What is the cost of each plant?

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Write and solve a system of equations that represents each situation. Interpret the solution. (Examples 1–4)

Write Your Steps

4. Mrs. Adesso wants to take her class on a trip to either the science center or natural history museum. The science center charges $7 per student, plus $75 for a guided tour. The natural history museum charges $8 per student, plus $50 for a guided tour. For what number of students is the cost of the trip the same at each museum?

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Write Your Steps

5. **Open Response** It costs $5 per hour to rent a snowboard from a certain ski rental company, plus a $50 deposit. Another ski rental company charges $10 per hour to rent a snowboard, plus a $25 deposit. For what number of hours is the cost to rent a snowboard the same at each company? What is the cost of renting a snowboard for this number of hours?

Hours, x:

Cost, y:

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