

شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



نموذج أسئلة وفق الهيكل الوزاري - ريفيل

موقع المناهج ← المناهج الإماراتية ← الصف العاشر المتقدم ← رياضيات ← الفصل الثاني ← الملف

التواصل الاجتماعي بحسب الصف العاشر المتقدم



روابط مواد الصف العاشر المتقدم على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف العاشر المتقدم والمادة رياضيات في الفصل الثاني

[دليل تصحيح أسئلة الامتحان الورقي - بريدج](#)

1

[أسئلة الامتحان النهائي الالكتروني والورقي - بريدج](#)

2

[حل تجميعة أسئلة وفق الهيكل الوزاري](#)

3

[حل نموذج مراجعة وفق الهيكل الوزاري](#)

4

[نموذج أسئلة وفق الهيكل الوزاري - ريفيل](#)

5

رياضيات 2023

هيكل 10 متقدم ريفيل

Mr Tarek Ali

0562854282



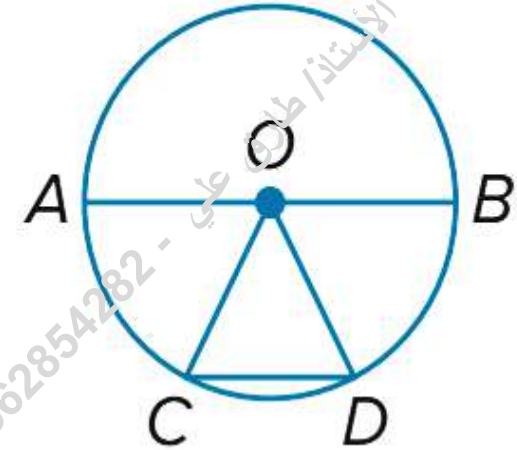
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For Exercises 1–3, refer to the circle at the right.

1. Name the circle.
2. Name the radii of the circle.
3. Name the chords of the circle.

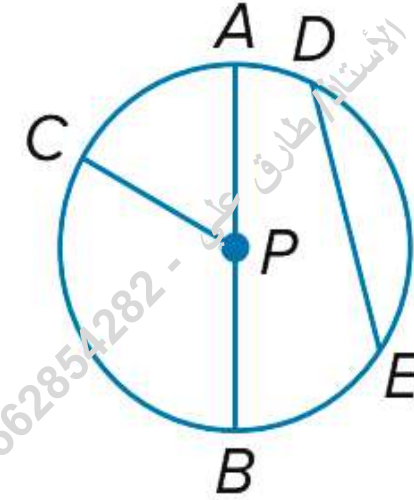


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For Exercises 4–8, refer to the circle at the right.

4. Name the circle.
5. Name the radii of the circle.
6. Name the chords of the circle.
7. Name a diameter of the circle.
8. Name a radius not drawn as part of a diameter.

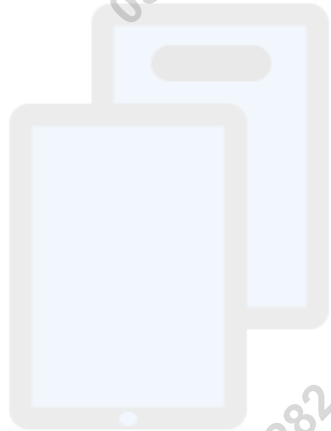
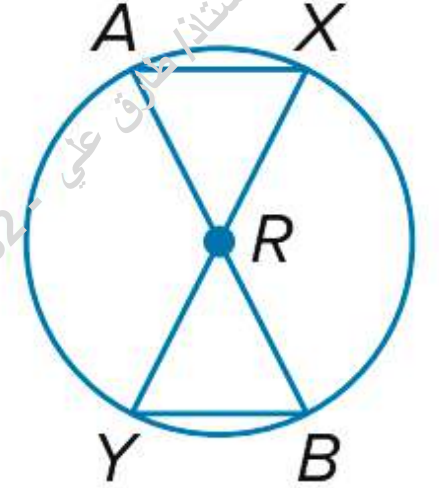


For Exercises 9–11, refer to $\odot R$.

9. If $AB = 18$ millimeters, find AR .

10. If $RY = 10$ inches, find AR and AB .

Is $\overline{AB} \cong \overline{XY}$? Explain.



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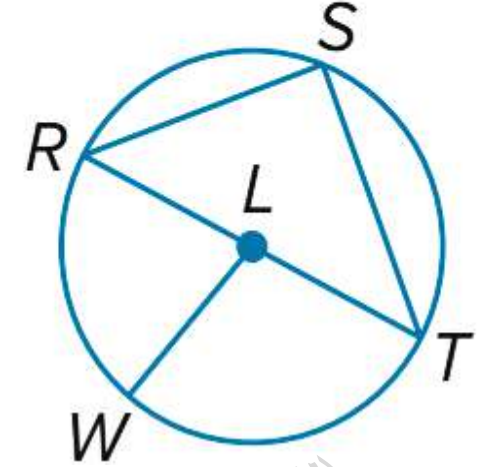
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For Exercises 12–14, refer to $\odot L$.

12. Suppose the radius of the circle is 3.5 yards. Find the diameter.

13. If $RT = 19$ meters, find LW .

14. If $LT = 4.2$ inches, what is the diameter of $\odot L$?



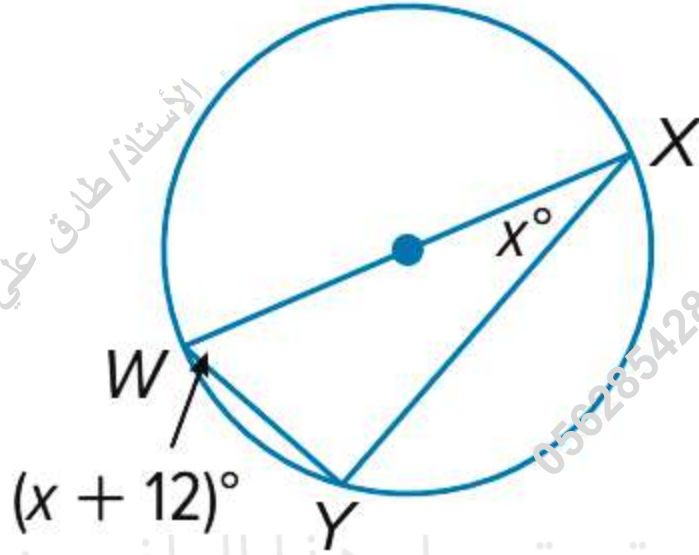
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Find each value.

13. x

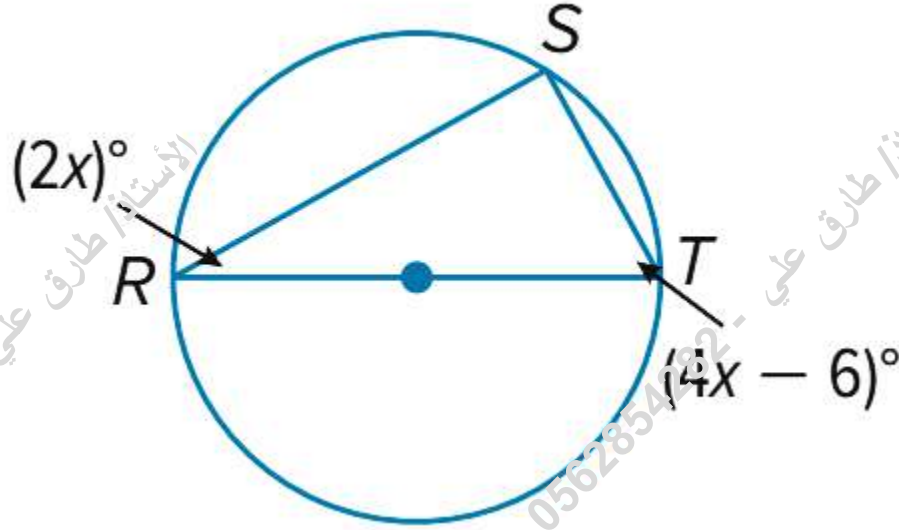
14. $m\angle W$



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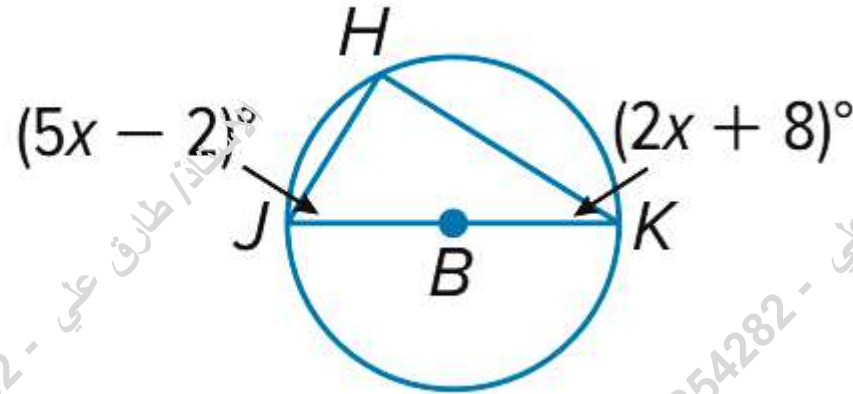
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15. x 16. $m\angle T$ 

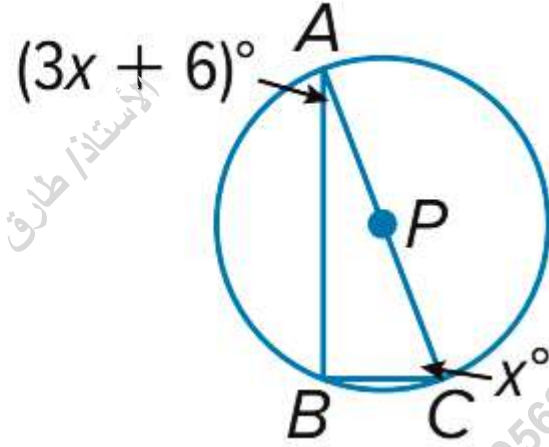
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17. $m\angle J$ 18. $m\angle K$ 

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19. $m\angle A$ 20. $m\angle C$ 

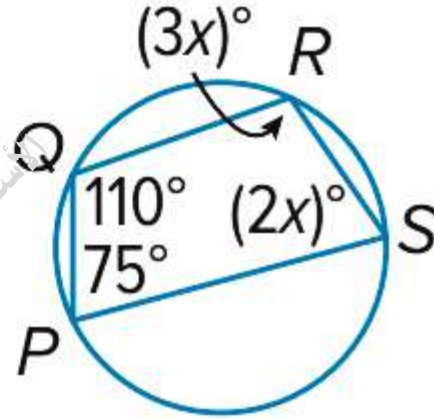
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Find each measure.

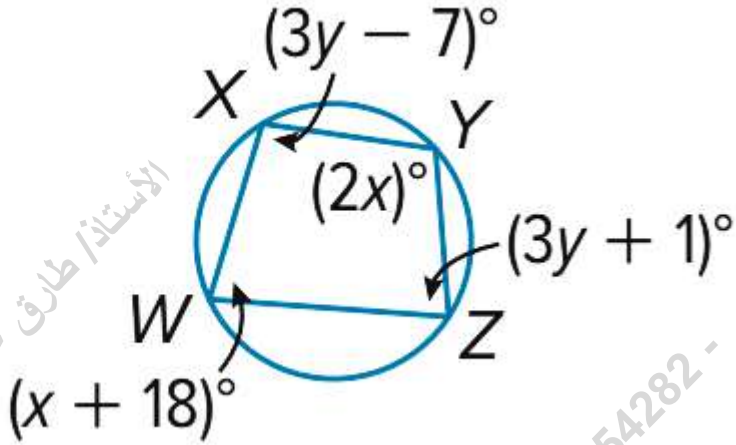
21. $m\angle R$

22. $m\angle S$



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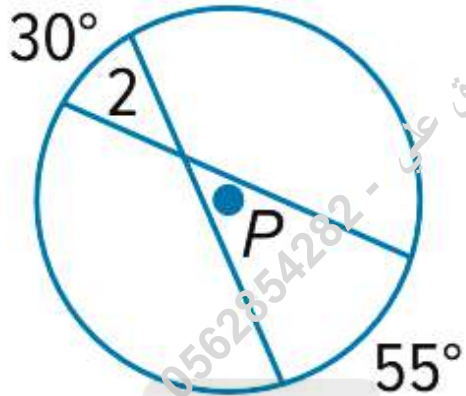
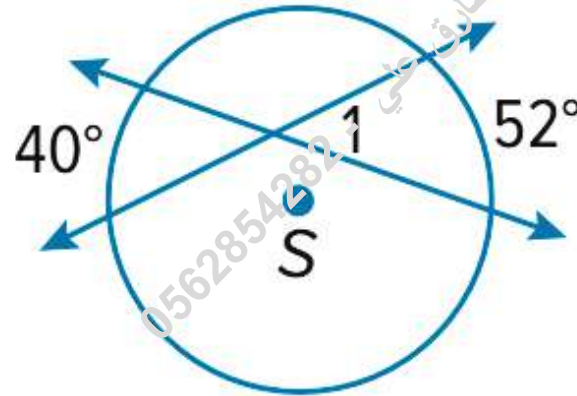
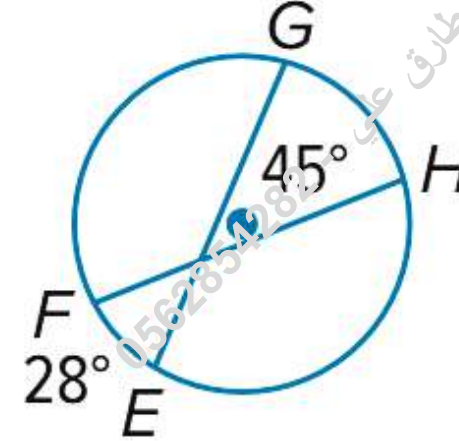
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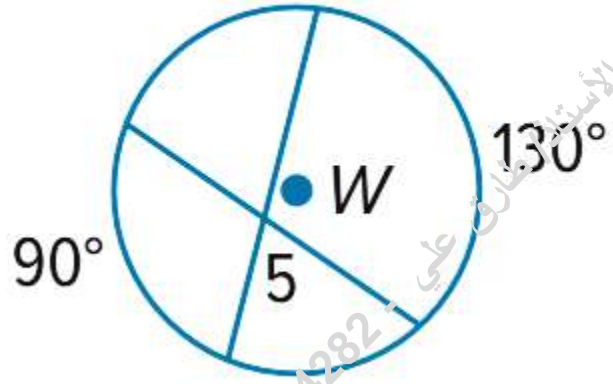
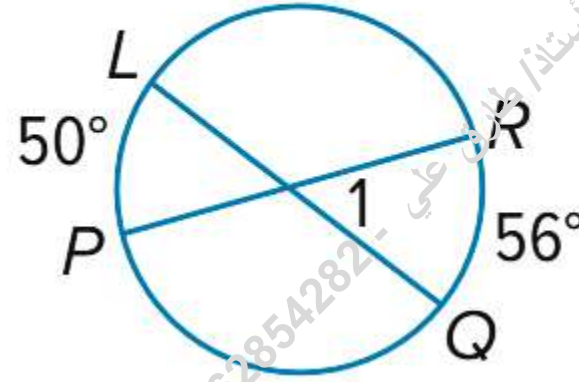
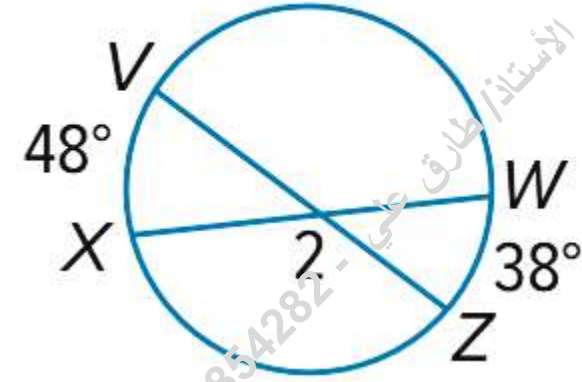
23. $m\angle W$ 24. $m\angle X$ 

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Find each measure.

1. $m\angle 2$ 2. $m\angle 1$ 3. $m\widehat{GH}$ 

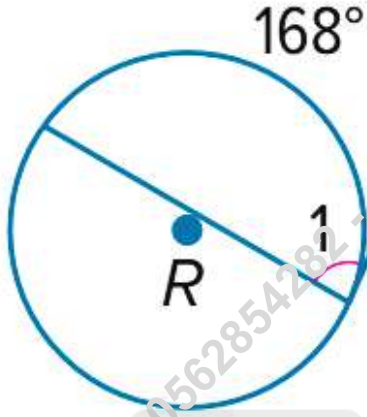
4. $m\angle 5$ 5. $m\angle 1$ 6. $m\angle 2$ 

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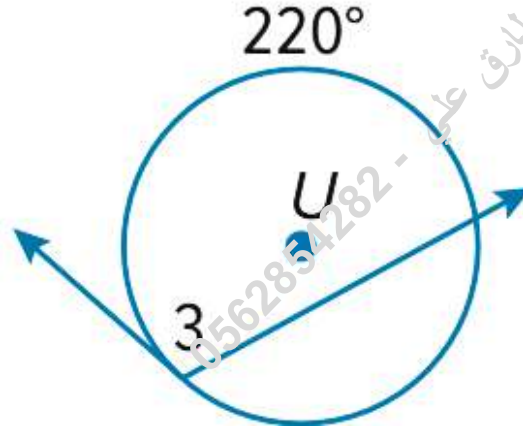
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Find each measure. Assume that segments that appear to be tangent are tangent.

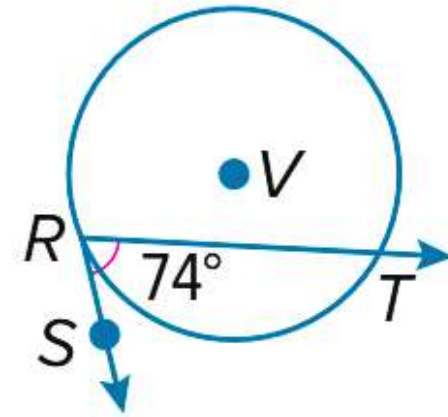
7. $m\angle 1$



8. $m\angle 3$

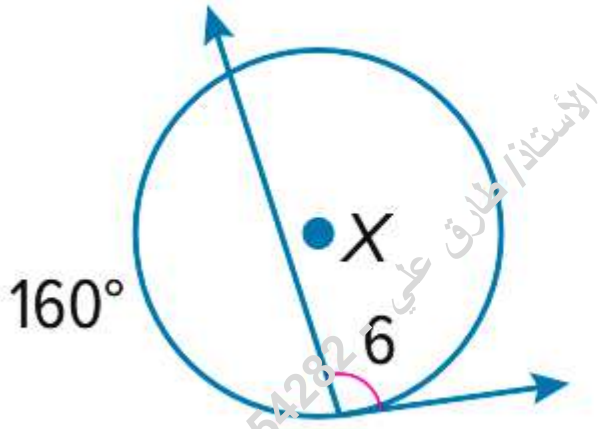
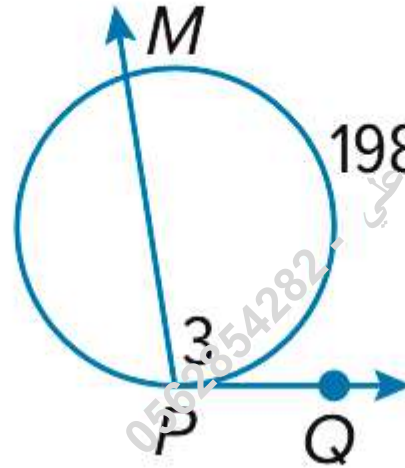
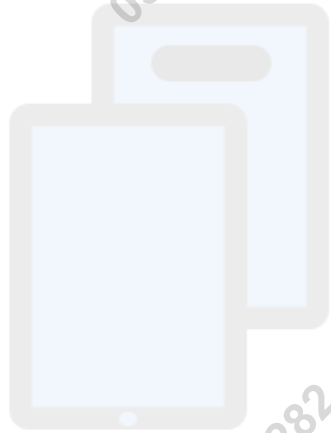
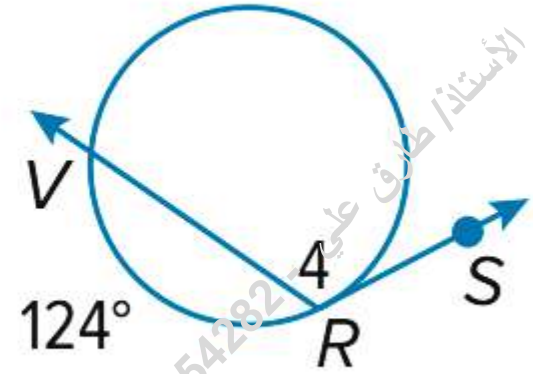


9. $m\widehat{RT}$



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10. $m\angle 6$ 11. $m\angle 3$ 12. $m\angle 4$ 

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Find the number of possible outcomes for each situation.

11. A video game lets you decorate a bedroom using one choice from each category.

Bedroom Décor	Number of Choices
Paint color	8
Comforter set	6
Sheet set	8
Throw rug	5
Lamp	3
Wall hanging	5

Find the number of possible outcomes for each situation.

12. A cafeteria meal at Angela's work includes one choice from each category.

Cafeteria Meal	Number of Choices
Main dish	3
Side dish	4
Vegetable	2
Salad	2
Salad Dressing	3
Dessert	2
Drink	3

13. **SHOPPING** On a website showcasing outdoor patio plans, there are 4 types of stone, 3 types of edging, 5 dining sets, and 6 grills. Kamar plans to order one item from each category. How many different patio sets can Kamar order?

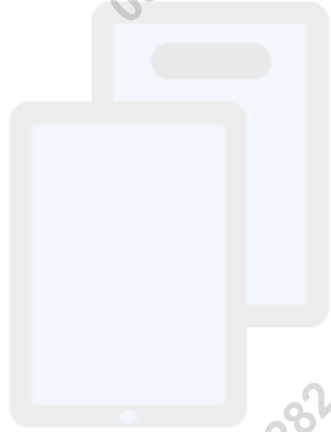
14. **AUDITIONS** The drama club held tryouts for 6 roles in a one-act play. Five people auditioned for lead female, 3 for lead male, 8 for the best friend, 4 for the mother, 2 for the father, and 3 for the humorous aunt. How many different casts can be created from those who auditioned?

15. **BOARD GAMES** The spinner shown is used in a board game. If the spinner is spun 4 times, how many different possible outcomes are there?



Determine the probability of each event. Round to the nearest hundredth, if necessary.

11. What is the probability of drawing a card from a standard deck and not getting a spade?
12. What is the probability of flipping a coin and not landing on tails?

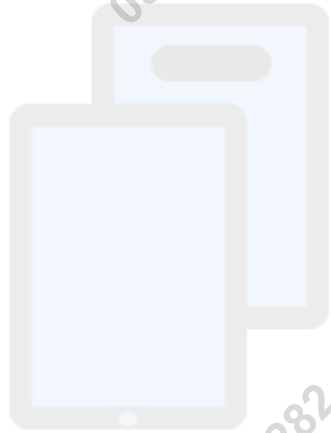


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Determine the probability of each event. Round to the nearest hundredth, if necessary.

13. Carmela purchased 10 raffle tickets. If 250 were sold, what is the probability that one of Carmela's tickets will not be drawn?
14. What is the probability of spinning a spinner numbered 1 to 6 and not landing on 5?



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15. **STATISTICS** A survey found that about 90% of the junior class is right-handed. If 1 junior is chosen at random out of 100 juniors, what is the probability that he or she is left-handed?

16. **RAFFLE** Raul bought 24 raffle tickets out of 1545 tickets sold. What is the probability that Raul will not win the grand prize of the raffle?

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17. **MASCOT** At Riverview High School, 120 students were asked whether they prefer a lion or a timber wolf as the new school mascot. What is the probability that a randomly-selected student will have voted for a lion as the new school mascot?

	Votes
Lion	78
Timber Wolf	42
Total	120

18. **COLLEGE** In Evan's senior class of 240 students, 85% are planning to attend college after graduation. What is the probability that a senior chosen at random is not planning to attend college after graduation?

Determine the number of solutions for each system. Then state whether the system of equations is *consistent* or *inconsistent* and whether it is *independent* or *dependent*.

1. $y = 3x$

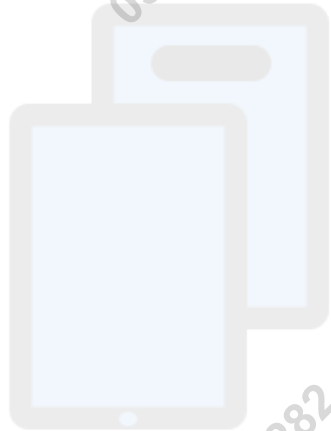
$y = -3x + 2$

2. $y = x - 5$

$-2x + 2y = -10$

3. $2x - 5y = 10$

$3x + y = 15$



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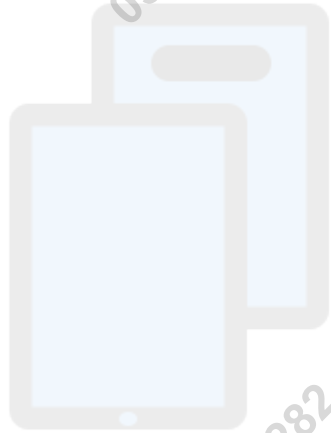
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Determine the number of solutions for each system. Then state whether the system of equations is *consistent* or *inconsistent* and whether it is *independent* or *dependent*.

4. $3x + y = -2$
 $6x + 2y = 10$

5. $x + 2y = 5$
 $3x - 15 = -6y$

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



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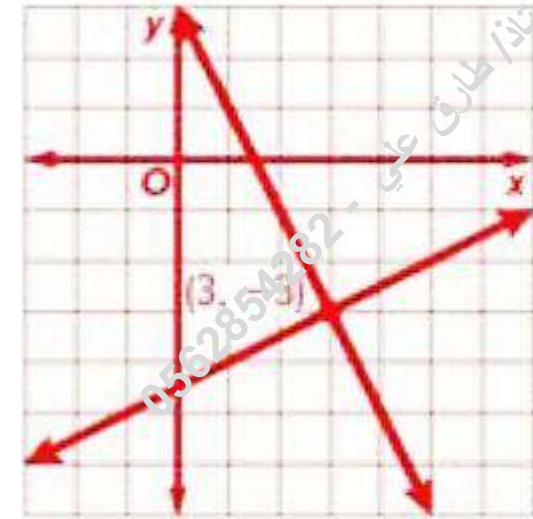
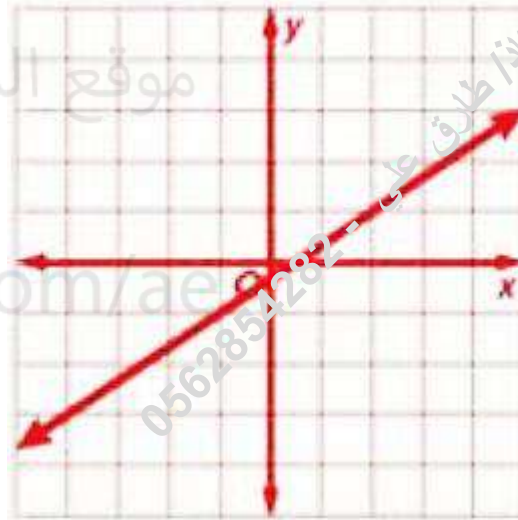
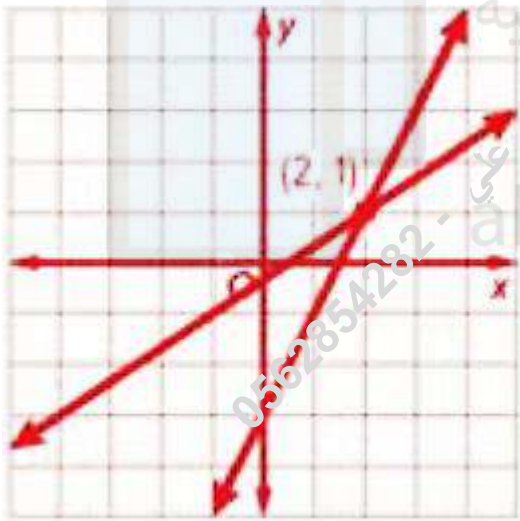
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Solve the system of equations by graphing.

7. $x - 2y = 0$
 $y = 2x - 3$

8. $-4x + 6y = -2$
 $2x - 3y = 1$

9. $2x + y = 3$
 $y = \frac{1}{2}x - \frac{9}{2}$



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Mr Tarek Ali

هيكل 10 متقدم ريفيل

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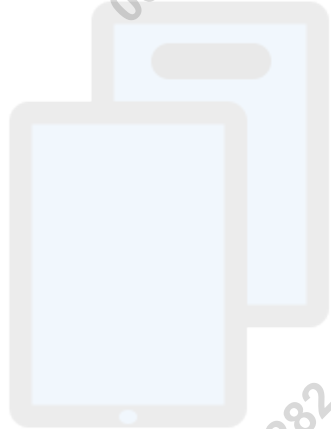
9-4

10. $y - x = 3$
 $y = 1$

11. $2x - 3y = 0$
 $4x - 6y = 3$

12. $5x - y = 4$
 $-2x + 6y = 4$

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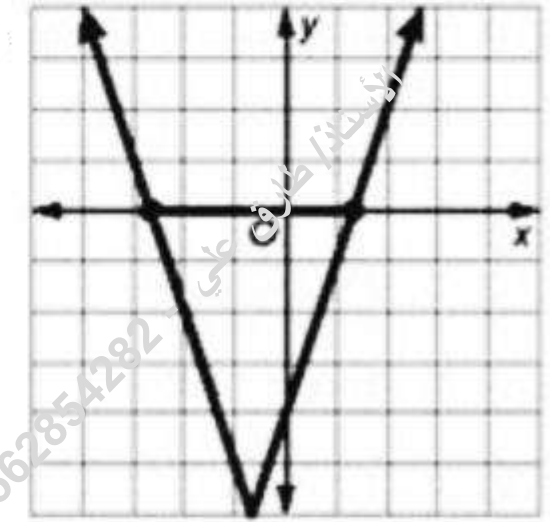
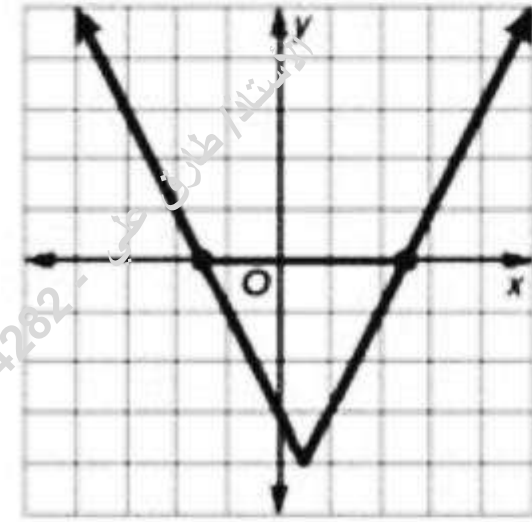
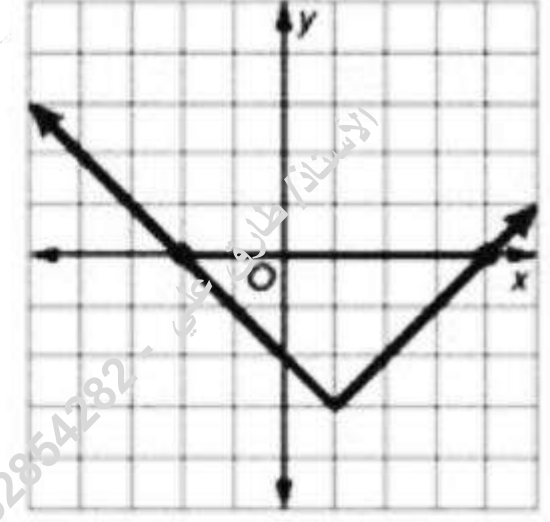
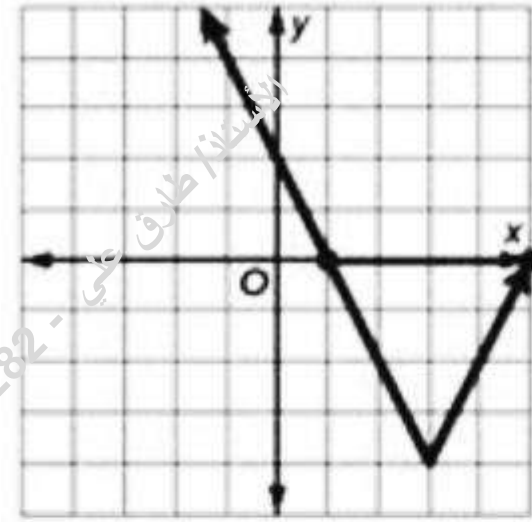
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Solve each inequality by graphing.

19. $|2x - 6| - 4 \leq 0$

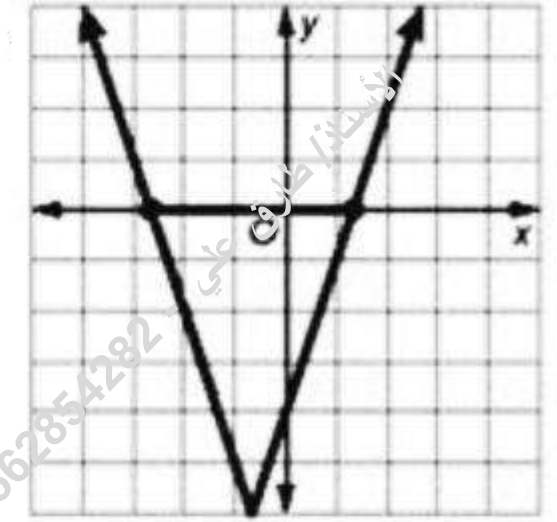
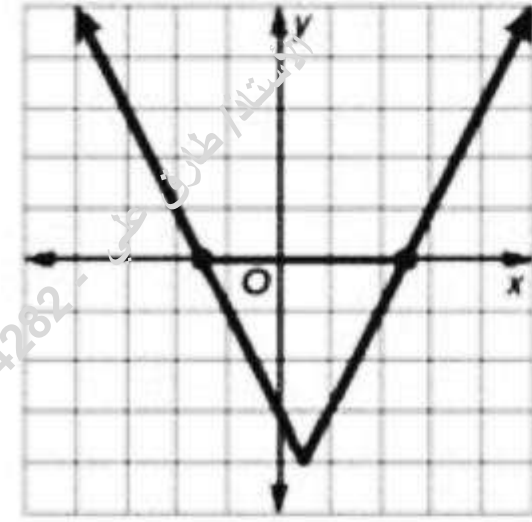
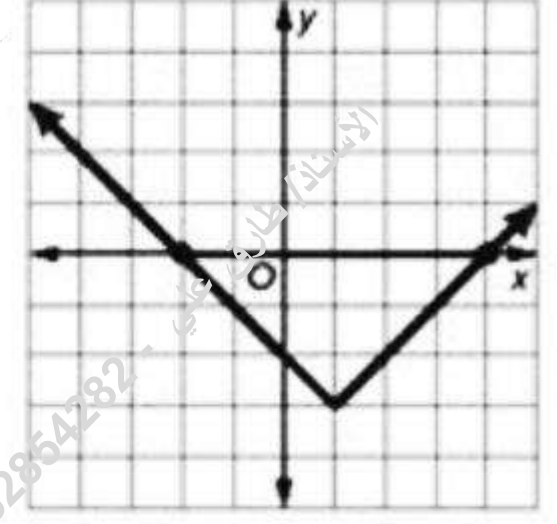
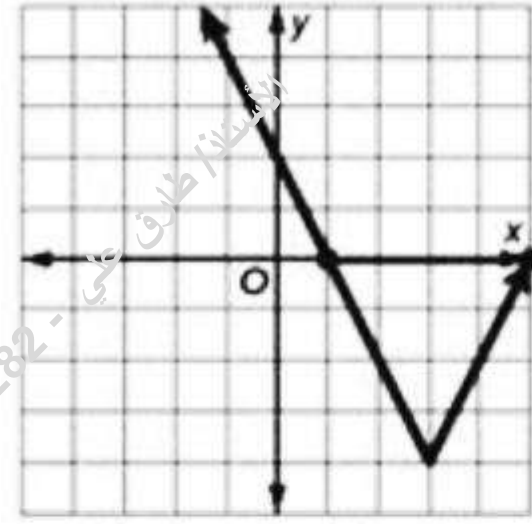


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Solve each inequality by graphing.

20. $|x - 1| - 3 \leq 0$

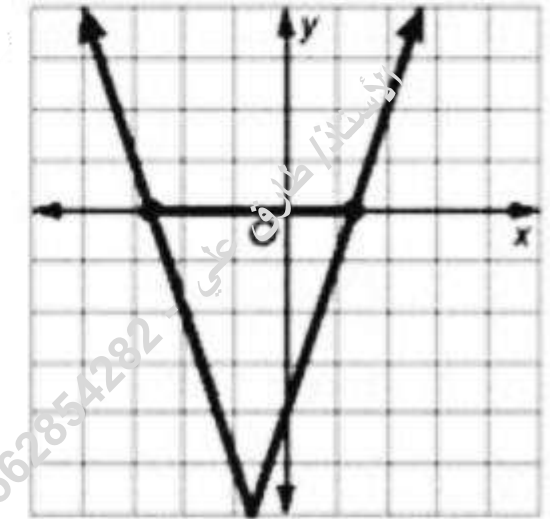
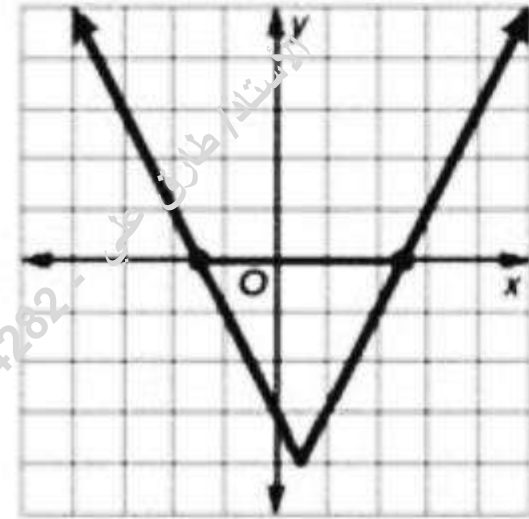
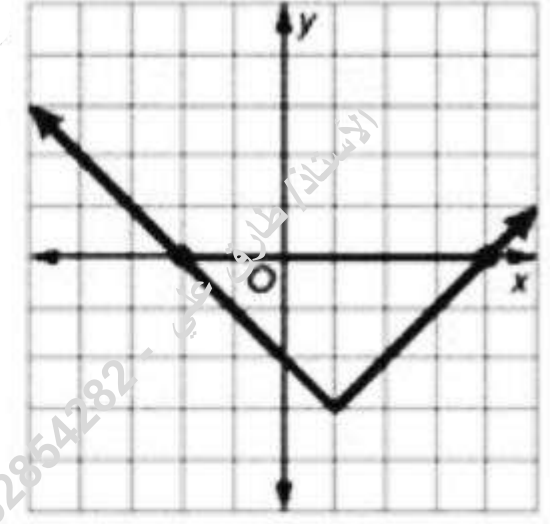
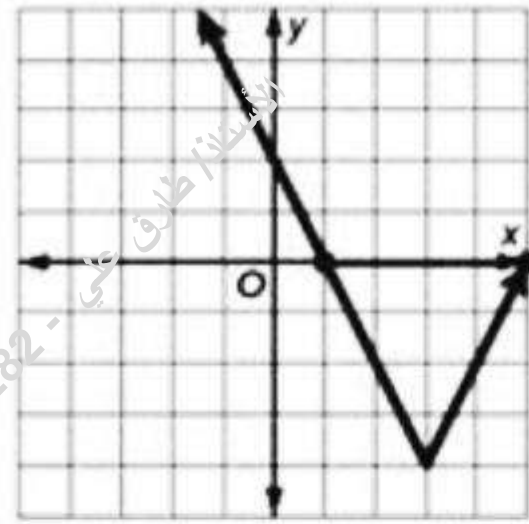


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Solve each inequality by graphing.

21. $|2x - 1| \geq 4$

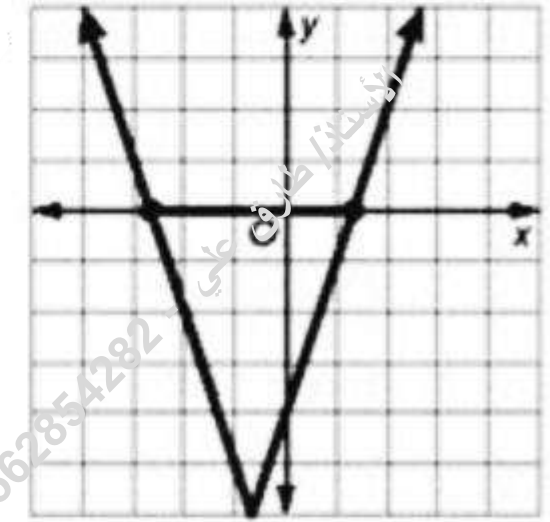
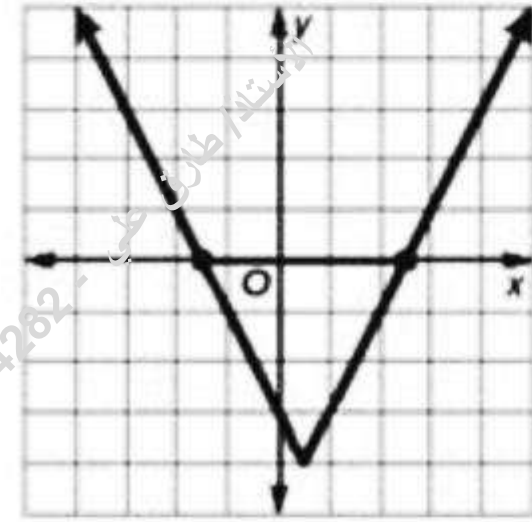
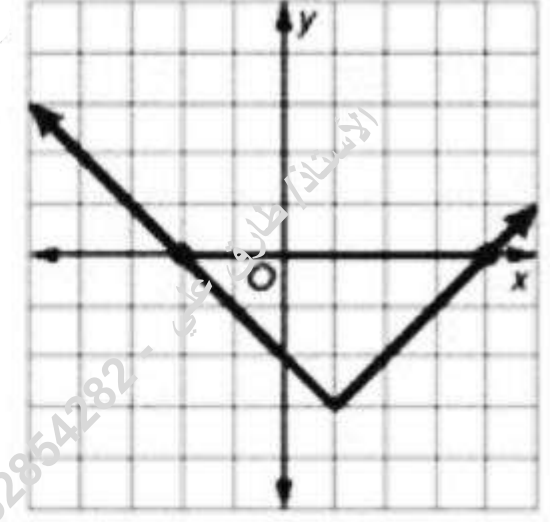
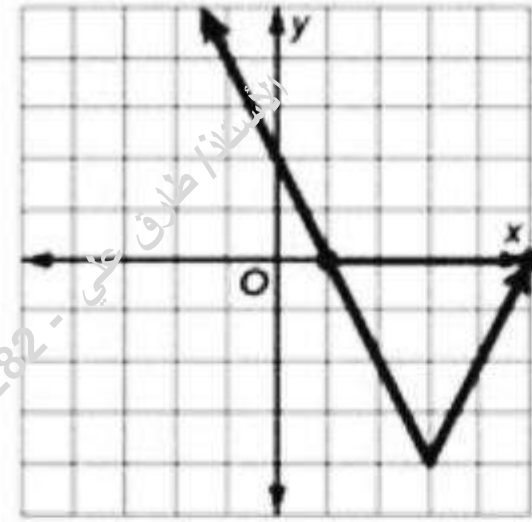


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Solve each inequality by graphing.

22. $|3x + 2| \geq 6$



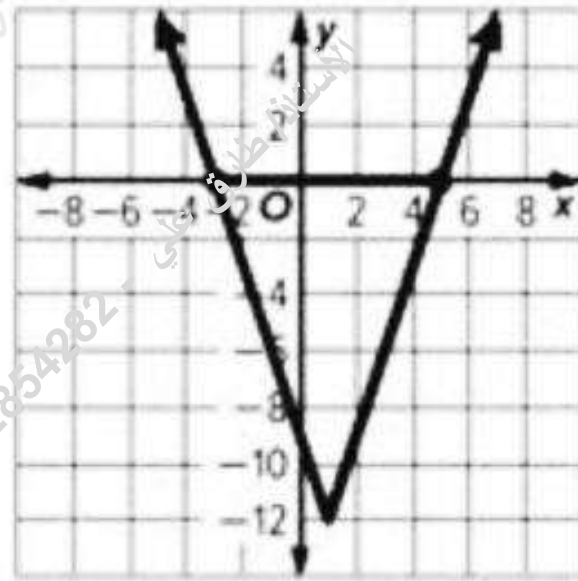
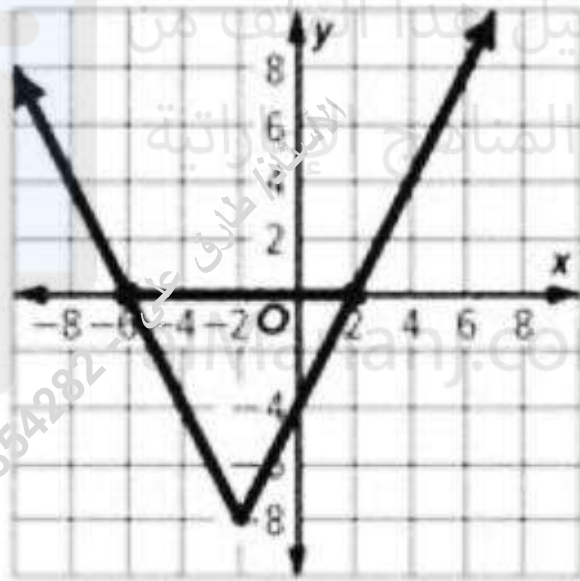
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Solve each inequality by graphing.

23. $2|x + 2| < 8$

24. $3|x - 1| < 12$

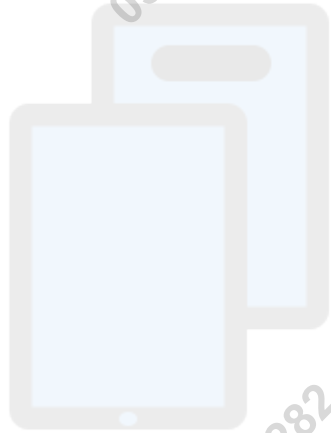


USE TOOLS Use a graphing calculator to solve each inequality.

25. $\left|\frac{1}{4}x + 4\right| - 1 > 0$

26. $\frac{2}{5}|x - 5| + 1 > 0$

27. $|3x - 1| < 2$



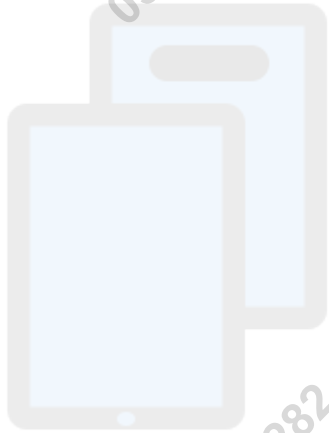
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28. $|4x + 1| \leq 1$

29. $\frac{1}{6}|x - 1| + 1 \leq 0$

30. $\frac{1}{4}|x + 5| - 1 \leq 1$

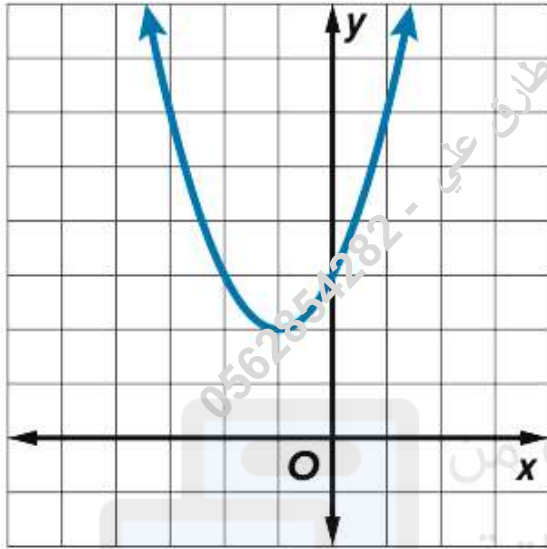


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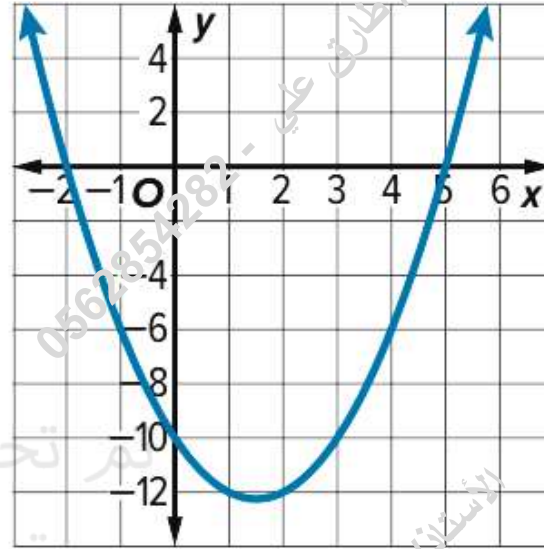
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Use the related graph of each equation to determine its solutions.

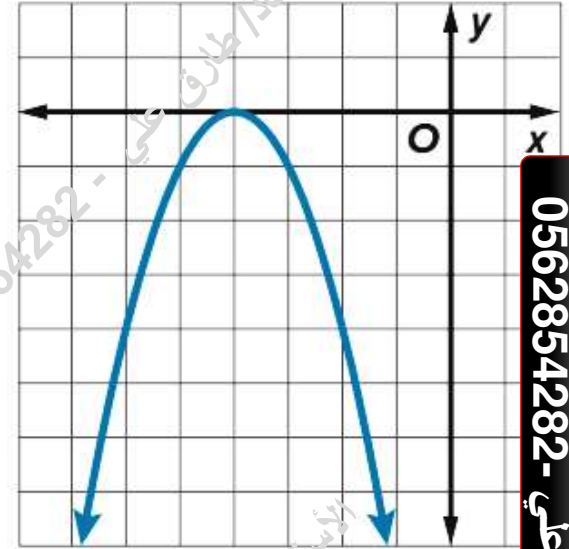
1. $x^2 + 2x + 3 = 0$



2. $x^2 - 3x - 10 = 0$



3. $-x^2 - 8x - 16 = 0$

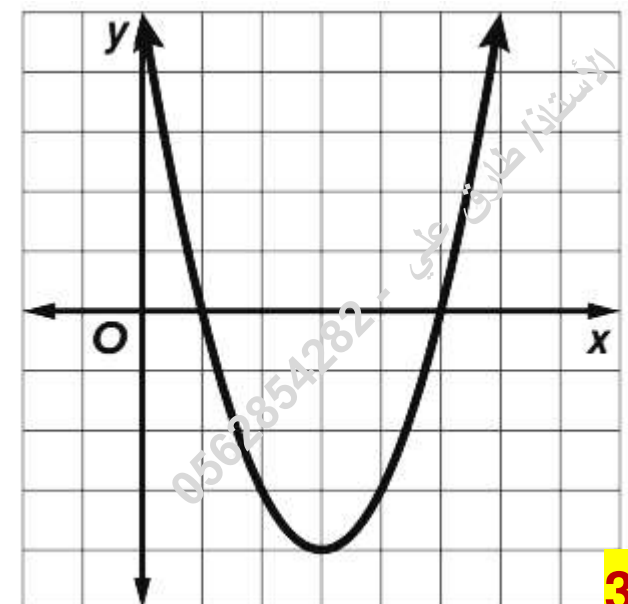
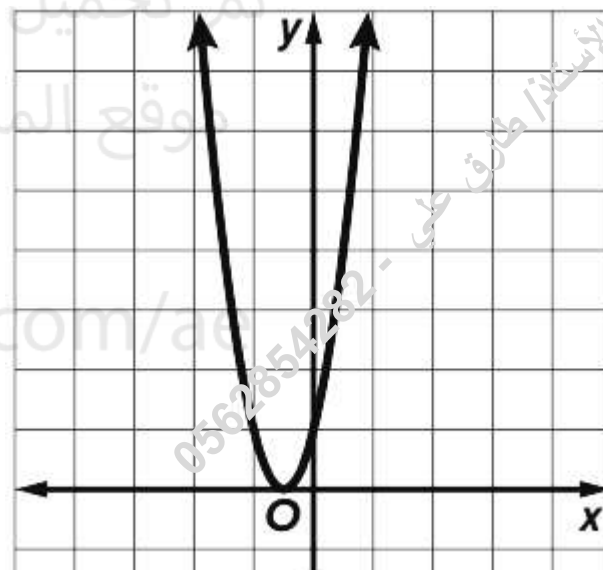
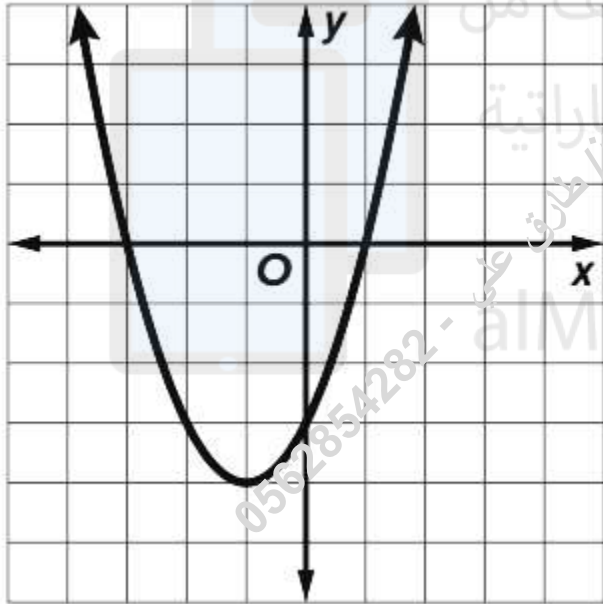


Solve each equation by graphing.

4. $x^2 - 10x + 21 = 0$

5. $4x^2 + 4x + 1 = 0$

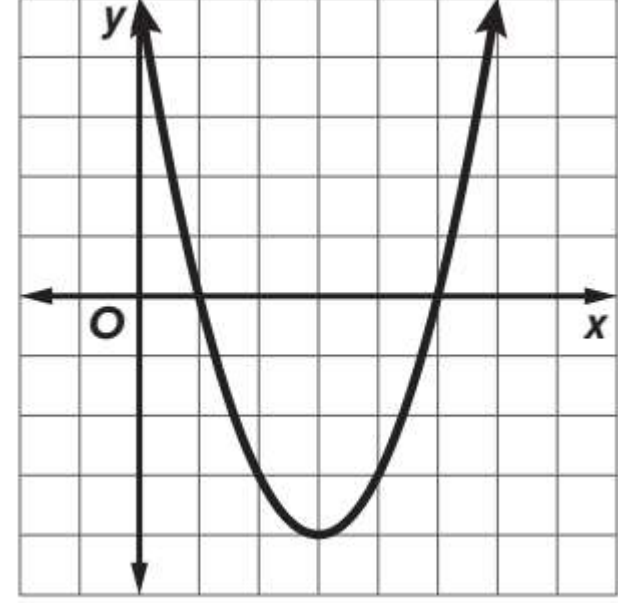
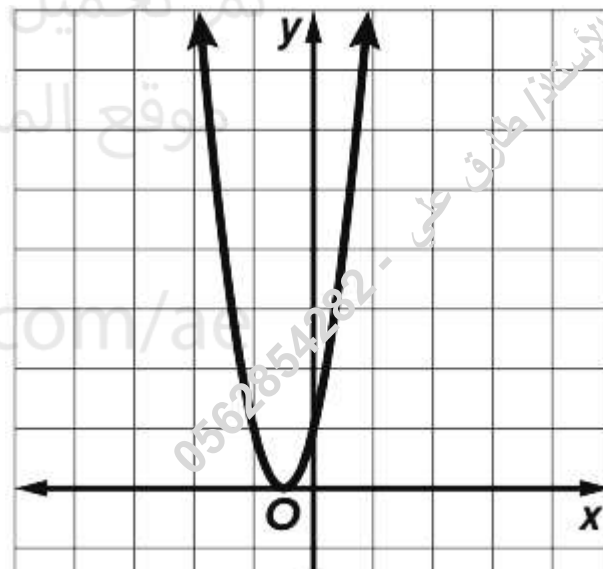
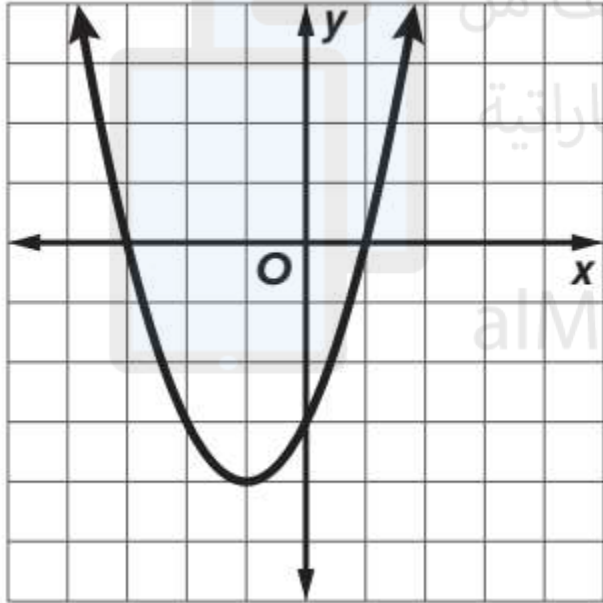
6. $x^2 + x - 6 = 0$



7. $x^2 + 2x - 3 = 0$

8. $-x^2 - 6x - 9 = 0$

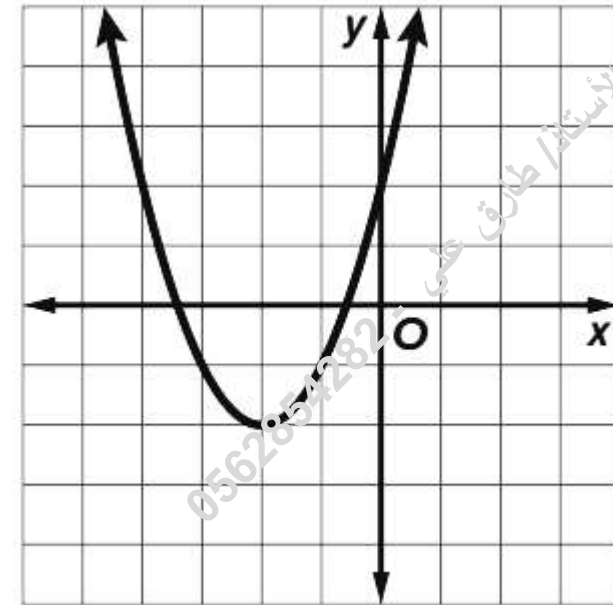
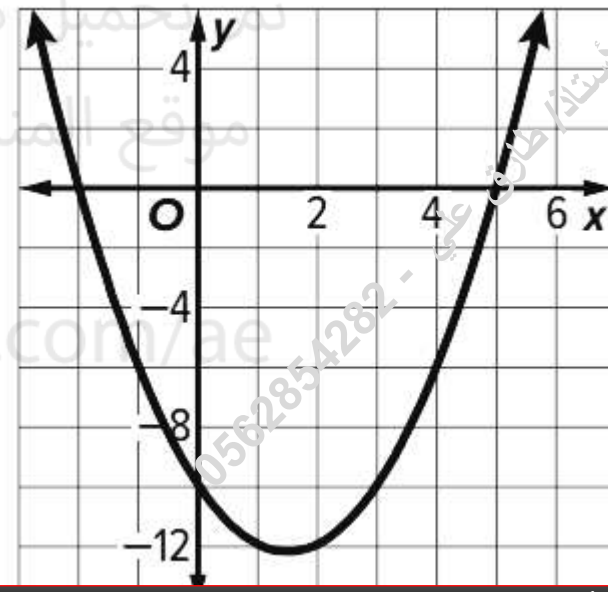
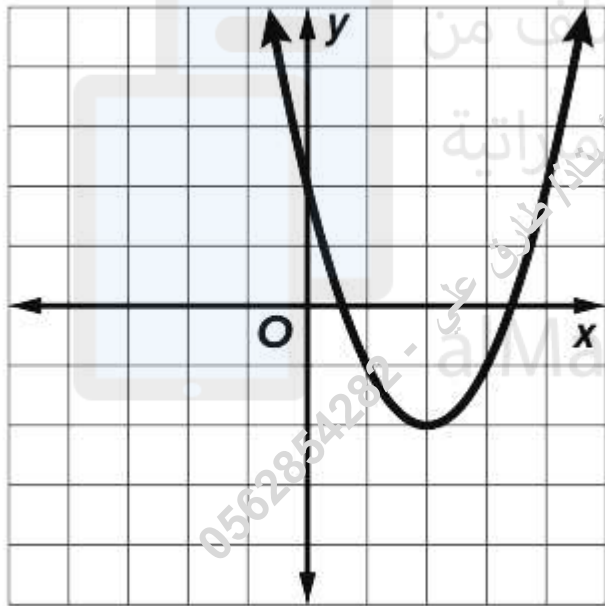
9. $x^2 - 6x + 5 = 0$



10. $x^2 + 2x + 3 = 0$

11. $x^2 - 3x - 10 = 0$

12. $-x^2 - 8x - 16 = 0$



Simplify.

1. $\sqrt{-48}$

2. $\sqrt{-63}$

3. $\sqrt{-72}$

4. $\sqrt{-24}$

5. $\sqrt{-84}$

6. $\sqrt{-99}$

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Simplify.

7. $\sqrt{-23} \cdot \sqrt{-46}$

8. $\sqrt{-6} \cdot \sqrt{-3}$

9. $\sqrt{-5} \cdot \sqrt{-10}$

10. $(3i)(-2i)(5i)$

11. i^{11}

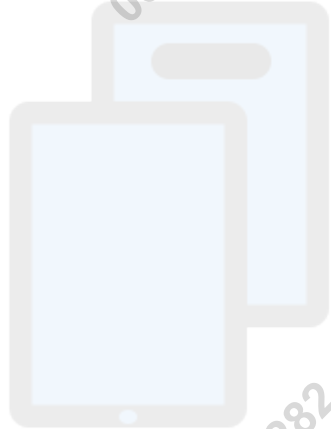
12. $4i(-6i)^2$

Solve each equation.

13. $5x^2 + 45 = 0$

14. $4x^2 + 24 = 0$

15. $-9x^2 = 9$



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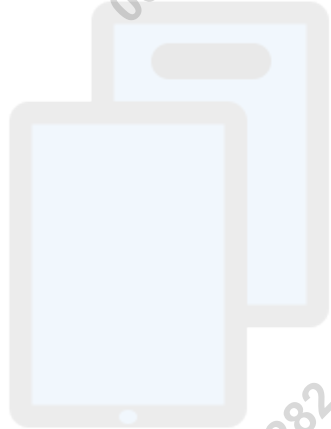
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Solve each equation.

$$16. 7x^2 + 84 = 0$$

$$17. 5x^2 + 125 = 0$$

$$18. 8x^2 + 96 = 0$$



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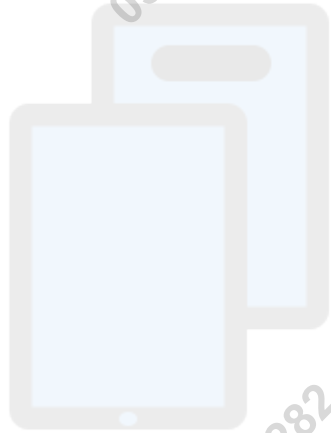
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Write each function in vertex form. Find the axis of symmetry. Then find the vertex, and determine if it is a *maximum* or *minimum*.

44. $y = x^2 + 2x - 5$

45. $y = x^2 + 6x + 1$

46. $y = -x^2 + 4x + 2$



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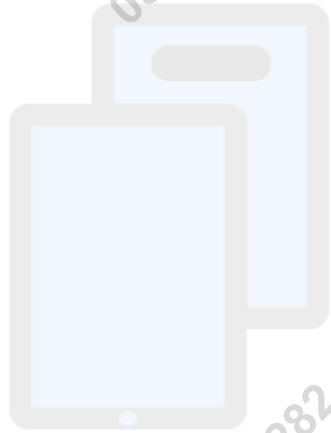
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Write each function in vertex form. Find the axis of symmetry. Then find the vertex, and determine if it is a *maximum* or *minimum*.

47. $y = -x^2 - 8x - 5$

48. $y = 2x^2 + 4x + 3$

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

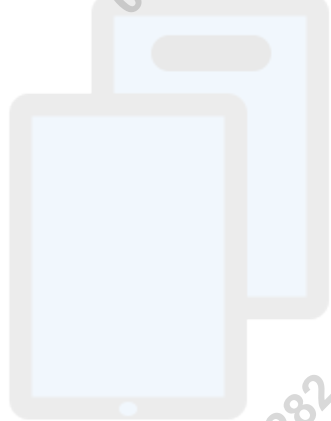


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50. **FIREWORKS** The height of a firework at an amusement park celebration can be modeled by a quadratic function. Suppose the firework is launched from a platform 2 feet off the ground at a velocity of 96 feet per second. Use $h(t) = -\frac{1}{2}gt^2 + vt + n_0$, where $g = 32 \frac{\text{ft}}{\text{s}^2}$.

- Write a function to represent this situation.
- Rewrite the function in vertex form.
- Find the axis of symmetry and the vertex and interpret their meaning in the context of the situation.

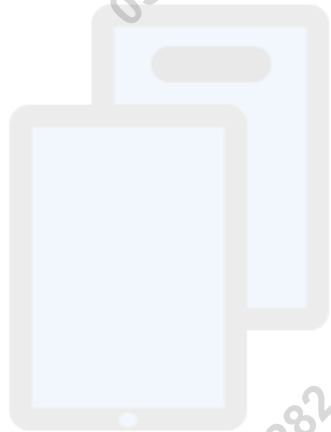


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51. **DIVING** Malik is participating in a diving championship. For each of his dives, his height above the water can be modeled by a quadratic function. The diving board is 7.5 meters above the water and Malik jumps with a velocity of 4.18 meters per second. Use $h(t) = -\frac{1}{2}gt^2 + vt + h_0$, where $g = 9.8 \frac{m}{s^2}$.
- Write a function in vertex form to represent this situation.
 - Find the axis of symmetry and the vertex and interpret their meaning in the context of the situation.



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Use $\odot D$ to find the length of each arc to the nearest hundredth. \overline{NL} is a diameter.

20. \widehat{LM} if the radius is 5 inches

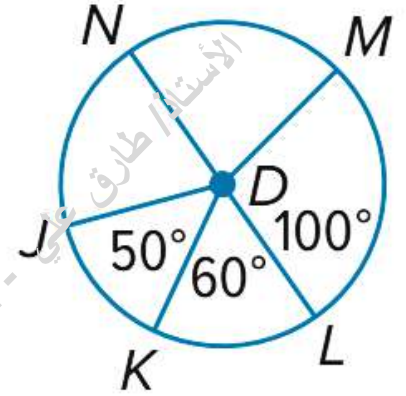
22. \widehat{KL} if $JD = 7$ centimeters

24. \widehat{KLM} if $DM = 9$ millimeters

21. \widehat{MN} if the diameter is 3 yards

23. \widehat{NJK} if $NL = 12$ feet

25. \widehat{JK} if $KD = 15$ inches



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Write each degree measure in radians as a multiple of π .

26. 120°

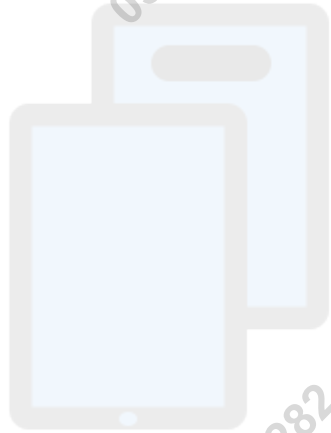
27. 45°

28. 30°

29. 90°

30. 180°

31. 225°



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Write each radian measure in degrees.

32. $\frac{3\pi}{4}$ radians

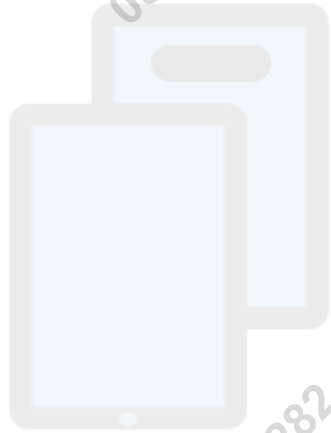
33. $\frac{3\pi}{2}$ radians

34. $\frac{\pi}{3}$ radians

35. $\frac{5\pi}{6}$ radians

36. 2π radians

37. $\frac{\pi}{12}$ radians

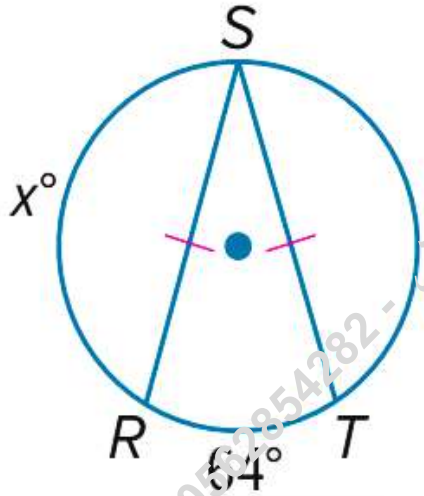


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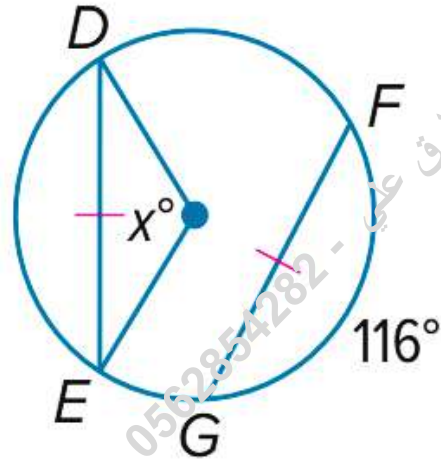
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REGULARITY Find the value of x.

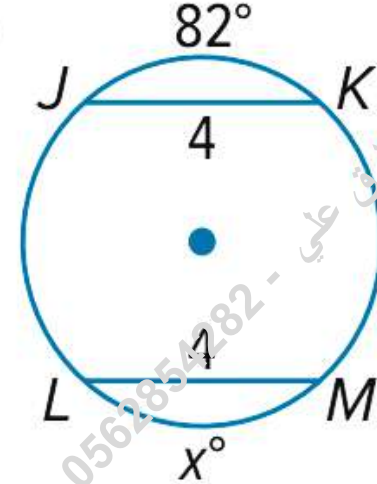
1.



2.



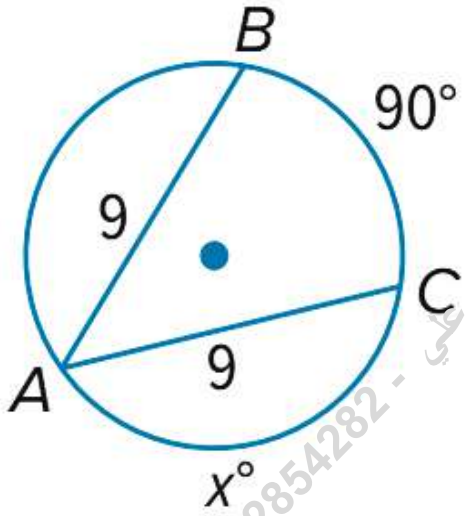
3.



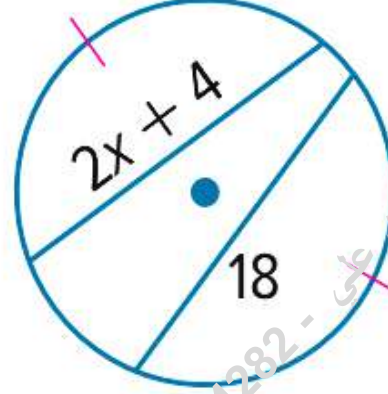
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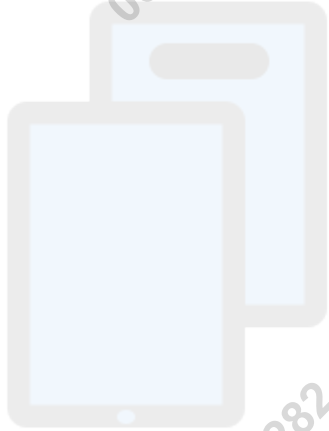
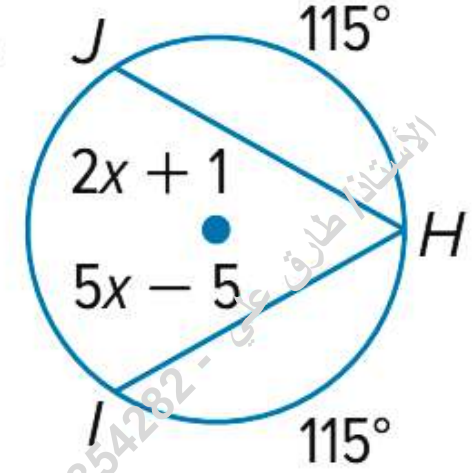
4.



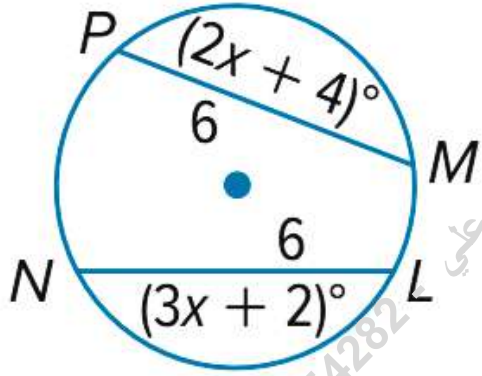
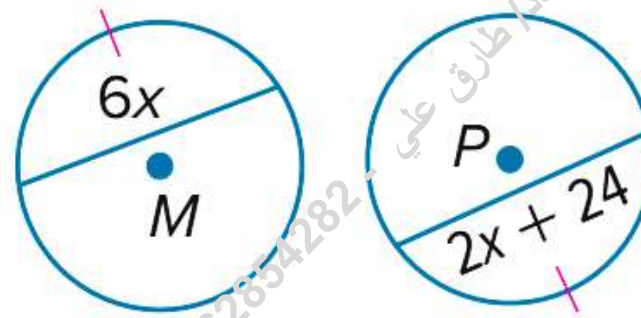
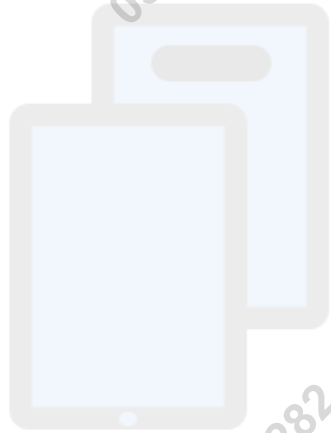
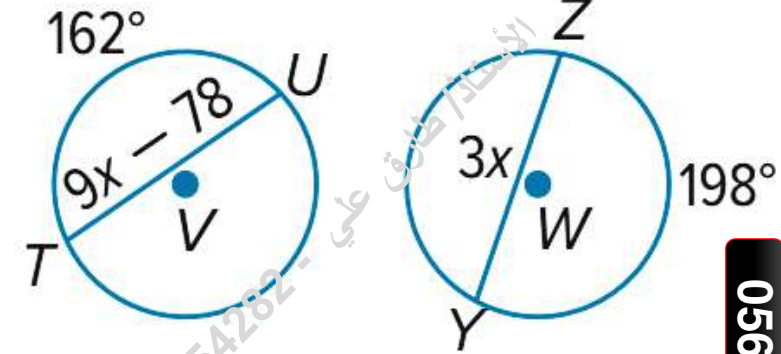
5.



6.



7.

8. $\odot M \cong \odot P$ 9. $\odot V \cong \odot W$ 

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1. A fair die is rolled once. Let A be the event of rolling an even number, and let B be the event of rolling a number greater than 4. Find $A \cap B$.

2. A fair die is rolled once. Let A be the event of rolling an even number, and let B be the event of rolling an odd number. Find $A \cap B$.

Use the spinner.

3. Let A be the event of the spinner landing on 4 or 10, and let B be the event of the spinner landing on a section with a number divisible by 4. What are the possible outcomes of each event?

a. $A = \{ _ ? _ \}$

b. $B = \{ _ ? _ \}$

c. $A \cap B = \{ _ ? _ \}$



4. Let P be the event of the spinner landing on a section with a prime number, and let Q be the event of the spinner landing on a section with a number that is a multiple of 3. What are the possible outcomes of each event?

a. $P = \{ \text{---} ? \}$

b. $Q = \{ \text{---} ? \}$

c. $P \cap Q = \{ \text{---} ? \}$

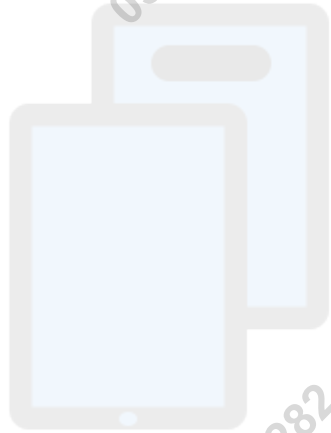
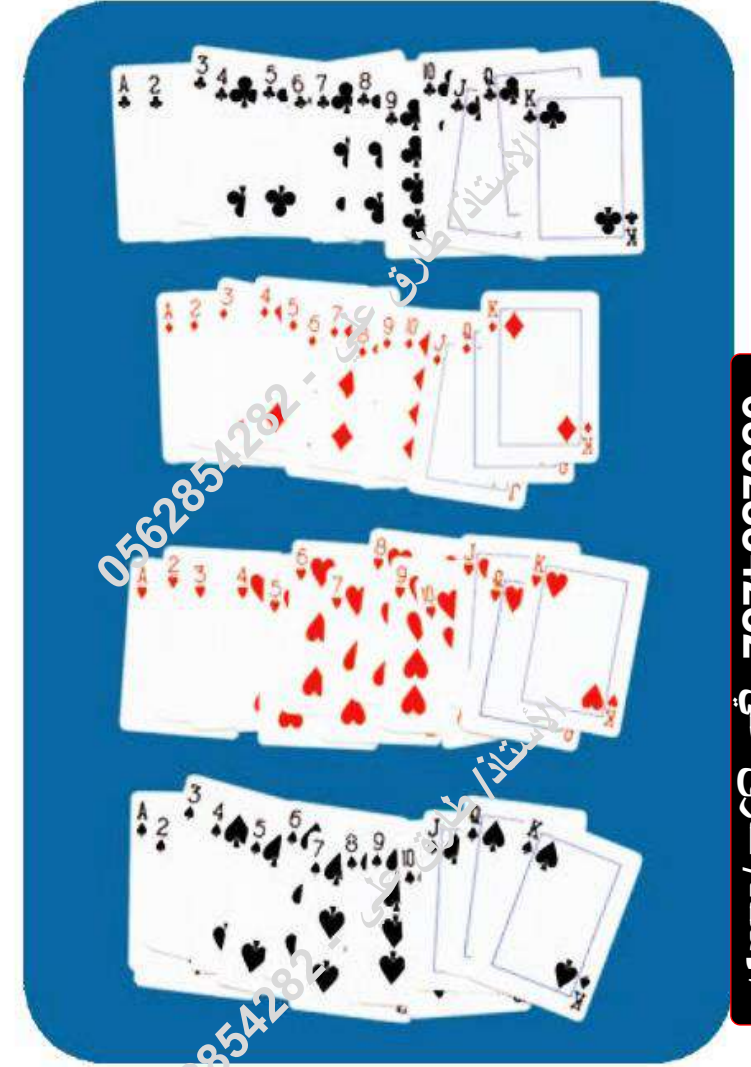
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Example 2

5. A card is selected from a standard deck of cards. What is the probability that the card is a diamond and is a seven?
6. A card is selected from a standard deck of cards. What is the probability that the card has a number on it that is divisible by 2 and is black?



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Example 3

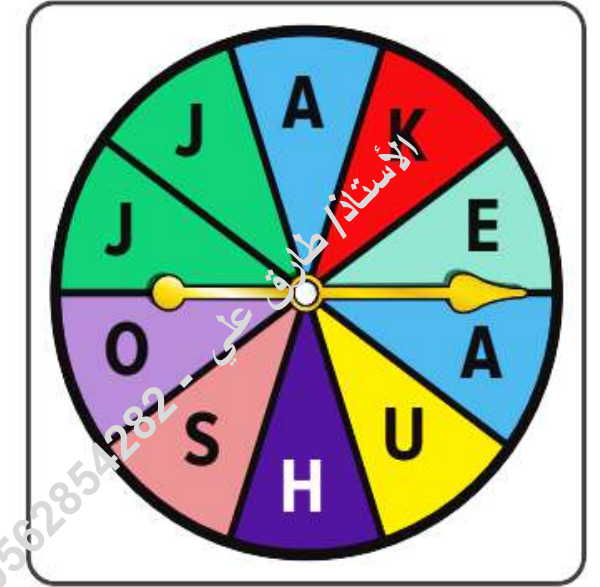
Use the spinner.

7. Let A be the event that the spinner lands on a vowel. Let B be the event that it lands on the letter J. What are the possible outcomes of each event?

a. $A = \{ _ ? \}$

b. $B = \{ _ ? \}$

c. $A \cup B = \{ _ ? \}$



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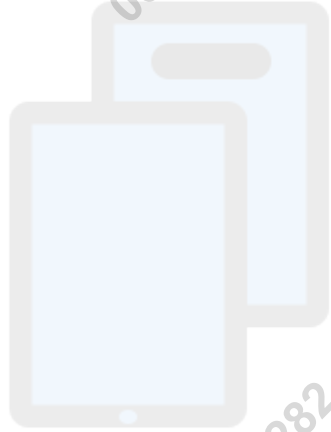
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8. Let X be the event that the spinner lands on a consonant. Let Y be the event that it lands on the letter K. What are the possible outcomes of each event?

a. $X = \{ \text{---?} \}$

b. $Y = \{ \text{---?} \}$

c. $X \cup Y = \{ \text{---?} \}$



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9. A random number generator is used to generate one integer between 1 and 20. Let C be the event of generating a multiple of 5, and let D be the event of generating a number less than 12. What are the possible outcomes of each event?

a. $C = \{ \text{---} ? \}$

b. $D = \{ \text{---} ? \}$

c. $C \cup D = \{ \text{---} ? \}$

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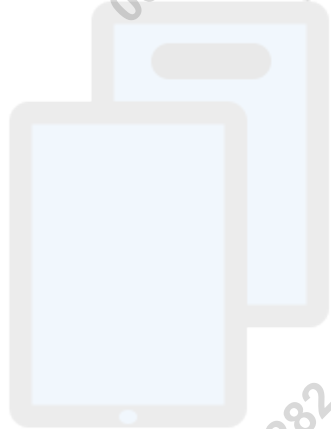
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10. A random number generator is used to generate one integer between 1 and 100. Let A be the event of generating a multiple of 10, and let B be the event of generating a factor of 30. What are the possible outcomes of each event?

a. $A = \{ \text{---?---} \}$

b. $B = \{ \text{---?---} \}$

c. $A \cup B = \{ \text{---?---} \}$



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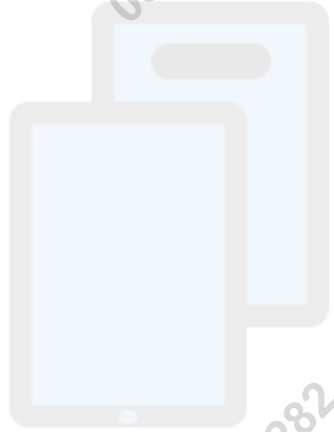
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Determine whether the events are *independent* or *dependent*. Explain your reasoning.

6. You roll an even number on a fair die, and then spin a spinner numbered 1 through 5 and it lands on an odd number.
7. An ace is drawn from a standard deck of 52 cards, and is not replaced. Then, a second ace is drawn.
8. In a bag of 3 green and 4 blue marbles, a blue marble is drawn and not replaced. Then, a second blue marble is drawn.
9. You roll two fair dice and roll a 5 on each.

10. **LOTTERY** Mr. Hanes places the names of four of his students, Joe, Sofia, Hayden, and Bonita, on slips of paper. From these, he intends to randomly select two students to represent his class at the robotics convention. He draws the name of the first student, sets it aside, then draws the name of the second student. What is the probability he draws Sofia, then Joe?



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11. **CARDS** A card is drawn from a standard deck of playing cards and is not replaced. Then a second card is drawn. Find the probability the first card is a jack of spades and the second card is black.

12. **INTRAMURAL SPORTS** The table shows the color and number of jerseys available for the intramural volleyball tournament. If each jersey is given away randomly, what is the probability that the first and second jerseys given away are both red?

Jersey Color	Amount
blue	20
white	15
red	25
black	10

CARDS Suppose you pull a card from a standard 52-card deck. Find the probability of each event.

7. The card is a 4.

8. The card is red.

9. The card is a face card.

10. The card is not a face card.

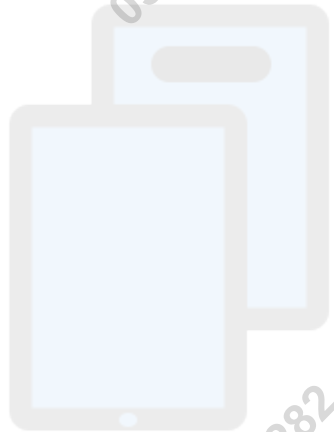
11. $P(\text{queen or heart})$

12. $P(\text{jack or spade})$

13. $P(\text{five or prime number})$

14. $P(\text{ace or black})$

15. A drawing will take place where one ticket is to be drawn from a set of 80 tickets numbered 1 to 80. If a ticket is drawn at random, what is the probability that the number drawn is a multiple of 4 or a factor of 12?

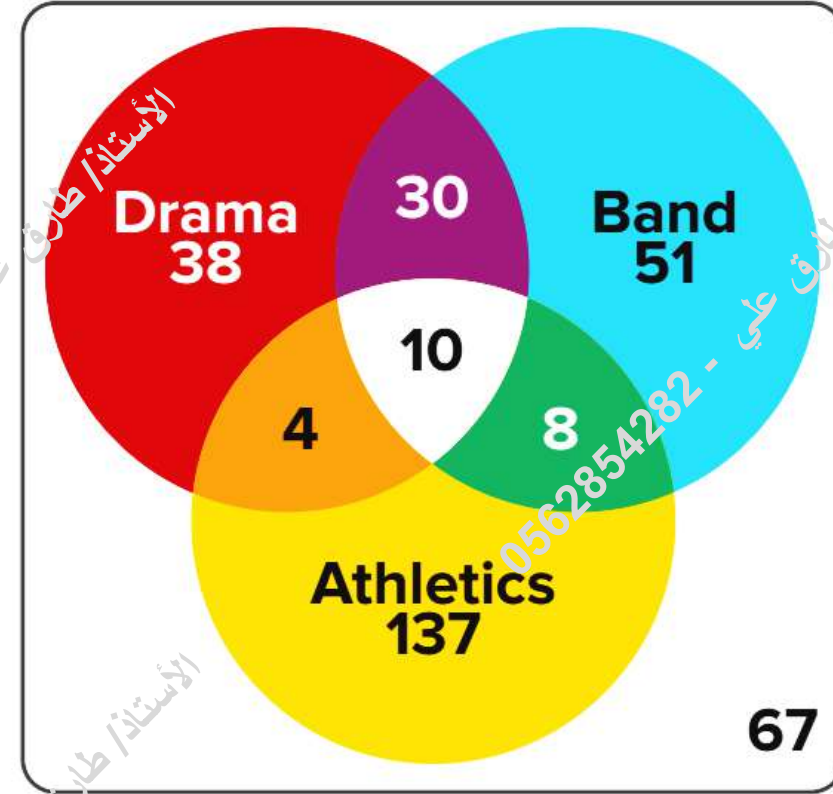


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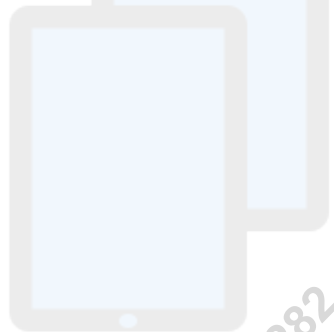
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16. **SCHOOL** The Venn diagram shows the extracurricular activities enjoyed by the senior class at Valley View High School.

- How many students are in the senior class?
- How many students participate in athletics?
- If a student is randomly chosen, what is the probability that the student participates in athletics or drama?
- If a student is randomly chosen, what is the probability that the student participates in only drama and band?



17. **BOWLING** Cindy's bowling records indicate that for any frame, the probability that she will bowl a strike is 30%, a spare 45%, and neither 25%. What is the probability that she will bowl either a spare or a strike for any given frame?
18. **SPORTS CARDS** Dario owns 145 baseball cards, 102 football cards, and 48 basketball cards. What is the probability that he randomly selects a baseball or a football card?



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19. SCHOLARSHIPS A review committee read 3000 application essays for one \$5000 college scholarship. Of the applications reviewed, 2865 essays were the required length, 2577 of the applicants had the minimum required grade-point average, and 2486 had the required length and minimum grade-point average. What is the probability that an application essay selected at random will have the required length or the required grade-point average?

20. PETS Ruby's cat had 8 kittens. The litter included 2 orange females, 3 mixed-color females, 1 orange male, and 2 mixed-color males. Ruby wants to keep one kitten. What is the probability that she randomly chooses a kitten that is female or orange?

21. **SPORTS** The table shows the age and number of participants in each sport at a sporting complex. What is the probability that a player is 14 or plays basketball?

Mason Sports Complex			
Age	Soccer	Volleyball	Basketball
14	28	36	42
15	30	26	33
16	35	41	29

22. **USE A MODEL** Vicente and Kelly are designing a board game. They decide that the game will use a pair of dice and the players will have to find the sum of the numbers rolled. Vicente and Kelly created the table shown to help determine probabilities. Each player will roll the pair of dice twice during that player's turn.

1, 1	1, 2	1, 3	1, 4	1, 5	1, 6
2, 1	2, 2	2, 3	2, 4	2, 5	2, 6
3, 1	3, 2	3, 3	3, 4	3, 5	3, 6
4, 1	4, 2	4, 3	4, 4	4, 5	4, 6
5, 1	5, 2	5, 3	5, 4	5, 5	5, 6
6, 1	6, 2	6, 3	6, 4	6, 5	6, 6

- What is the probability of rolling a pair or two numbers that have a sum of seven?
- What is the probability of rolling two numbers whose sum is an even number or not rolling a 2? Round to the nearest thousandth.

23. **PARKS** The table shows Parks and Recreation Department classes and the number of participants ages 7–9. What is the probability that a participant chosen at random is in drama or is an 8-year-old?

Age	Swimming	Drama	Art
7	40	35	25
8	30	21	14
9	20	44	11

24. **FLOWER GARDEN** Erin is planning her summer garden. The table shows the number of bulbs she has according to type and color of flower. If Erin randomly selects one of the bulbs, what is the probability that she selects a bulb for a yellow flower or a dahlia?

Flower	Orange	Yellow	White
Dahlia	5	4	3
Lily	3	1	2
Gladiolus	2	5	6
Iris	0	1	4

- CLUBS** The Spanish Club is having a potluck lunch where each student brings in a cultural dish. The 10 students randomly draw cards numbered with consecutive integers from 1 to 10. Students who draw odd numbers will bring main dishes. Students who draw even numbers will bring desserts. If Cynthia is bringing a dessert, what is the probability that she drew the number 10?
- A card is randomly drawn from a standard deck of 52 cards. What is the probability that the card is a king of diamonds, given that the card drawn is a king?

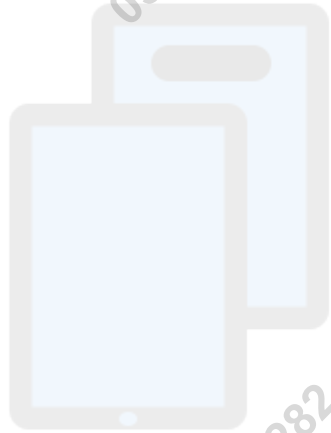


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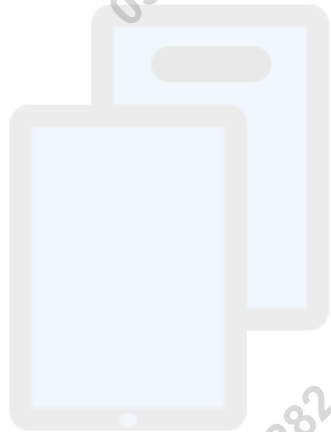
3. **GAME** In a game, a spinner with the 7 colors of the rainbow is spun. Find the probability that the color spun is blue, given the color is one of the three primary colors: red, yellow, or blue.
4. Fifteen cards numbered 1–15 are placed in a hat. What is the probability that the card has a multiple of 3 on it, given that the card picked is an odd number?



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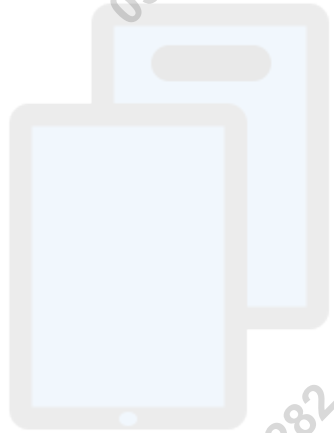
5. A blue marble is selected at random from a bag of 3 red and 9 blue marbles and not replaced. What is the probability that a second marble selected will be blue?
6. A die is rolled. If the number rolled is less than 5, what is the probability that it is the number 2?



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7. If two dice are rolled, what is the probability that the sum of the faces is 4, given that the first die rolled is odd?
8. A spinner numbered 1 through 12 is spun. Find the probability that the number spun is an 11 given that the number spun was an odd number.



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9. If two dice are rolled, what is the probability that the sum of the faces is 8, given that the first die rolled is even?
10. **PICNIC** A school picnic offers students hamburgers, hot dogs, chips, and a drink.
- At the picnic, 60% of the students order a hamburger and 48% of the students order a hamburger and chips. What is the conditional probability that a student who orders a hamburger also orders chips?
 - If 50% of the students ordered chips, are the events of ordering a hamburger and ordering chips independent? Explain.
 - If 80% of the students who ordered a hot dog also ordered a drink and 35% of all the students ordered a hot dog, find the probability that a student at the picnic orders a hot dog and drink. Explain.

Use substitution to solve each system of equations.

$$\begin{aligned} 1. \quad & 2x - y = 9 \\ & x + 3y = -6 \end{aligned}$$

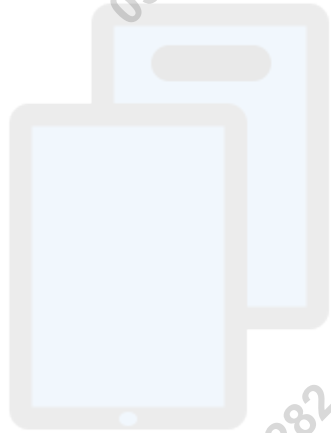
$$\begin{aligned} 2. \quad & 2x - y = 7 \\ & 6x - 3y = 14 \end{aligned}$$

$$\begin{aligned} 3. \quad & 2x + y = 5 \\ & 3x - 3y = 3 \end{aligned}$$

$$\begin{aligned} 4. \quad & 3x + y = 7 \\ & 4x + 2y = 16 \end{aligned}$$

$$\begin{aligned} 5. \quad & 4x - y = 6 \\ & 2x - \frac{y}{2} = 4 \end{aligned}$$

$$\begin{aligned} 6. \quad & 2x + y = 8 \\ & 3x + \frac{3}{2}y = 12 \end{aligned}$$



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Solve each system of equations.

1. $2x + 3y - z = 0$

$x - 2y - 4z = 14$

$3x + y - 8z = 17$

2. $2p - q + 4r = 11$

$p + 2q - 6r = -11$

$3p - 2q - 10r = 11$

3. $a - 2b + c = 8$

$2a + b - c = 0$

$3a - 6b + 3c = 24$

4. $3s - t - u = 5$

$3s + 2t - u = 11$

$6s - 3t + 2u = -12$

5. $2x - 4y - z = 10$

$4x - 8y - 2z = 16$

$3x + y + z = 12$

6. $p - 6q + 4r = 2$

$2p + 4q - 8r = 16$

$p - 2q = 5$

7. $2a + c = -10$

$b - c = 15$

$a - 2b + c = -5$

8. $x + y + z = 3$

$13x + 2z = 2$

$-x - 5z = -5$

9. $2m + 5n + 2p = 6$

$5m - 7n = -29$

$p = 1$

10. $f + 4g - h = 1$

$3f - g + 8h = 0$

$f + 4g - h = 10$

11. $-2c = -6$

$2a + 3b - c = -2$

$a + 2b + 3c = 9$

12. $3x - 2y + 2z = -2$

$x + 6y - 2z = -2$

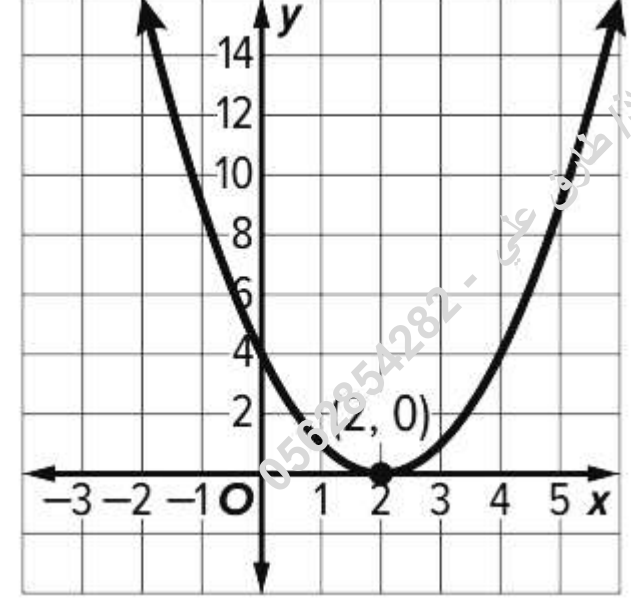
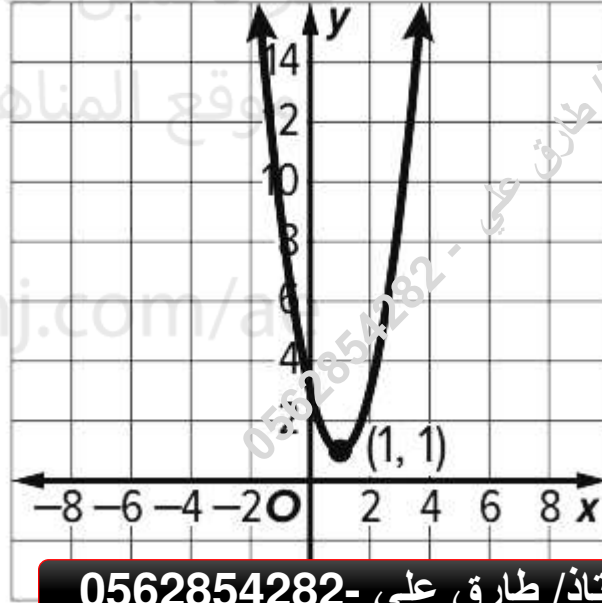
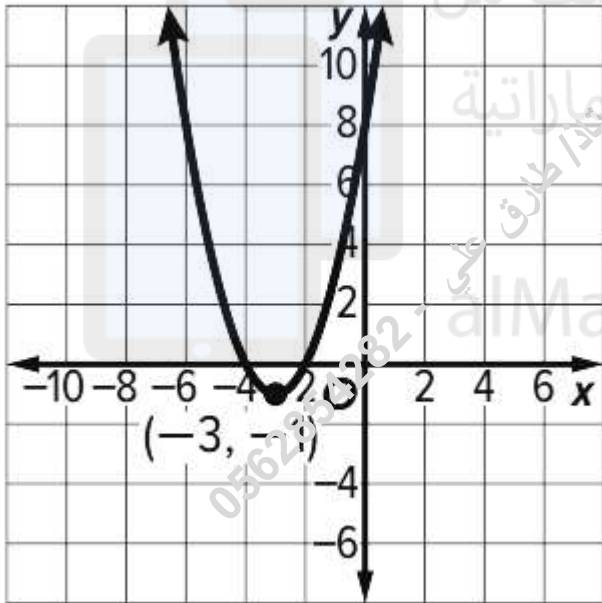
$x + 2y = 0$

Graph each function. Then state the domain and range.

1. $f(x) = x^2 + 6x + 8$

2. $f(x) = -x^2 - 2x + 2$

3. $f(x) = 2x^2 - 4x + 3$

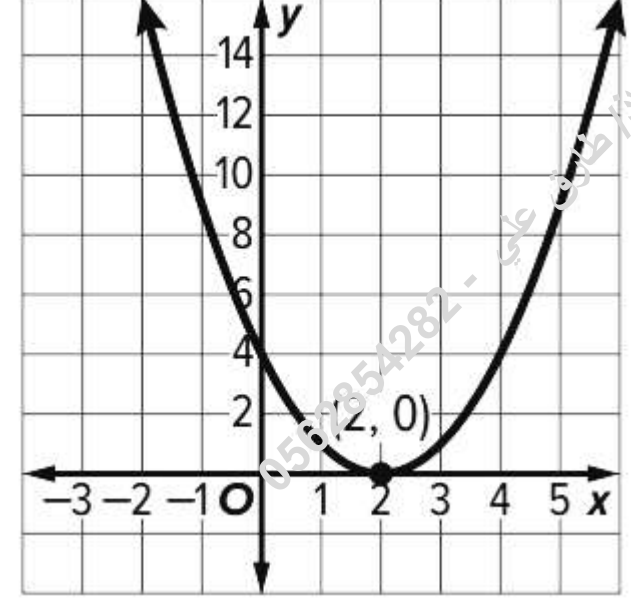
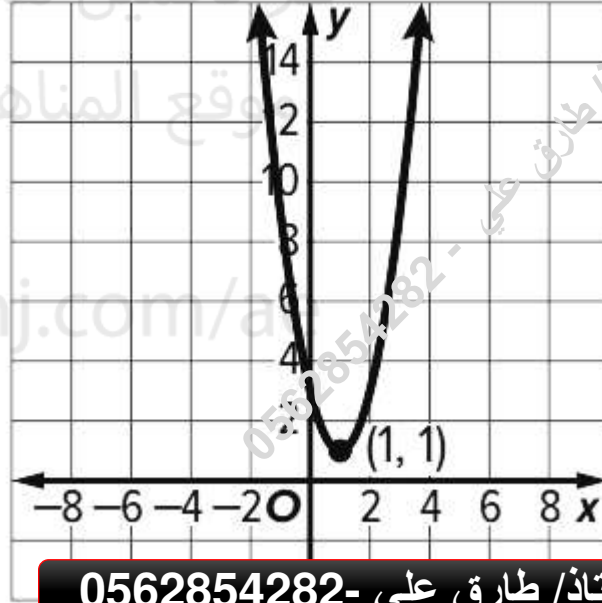
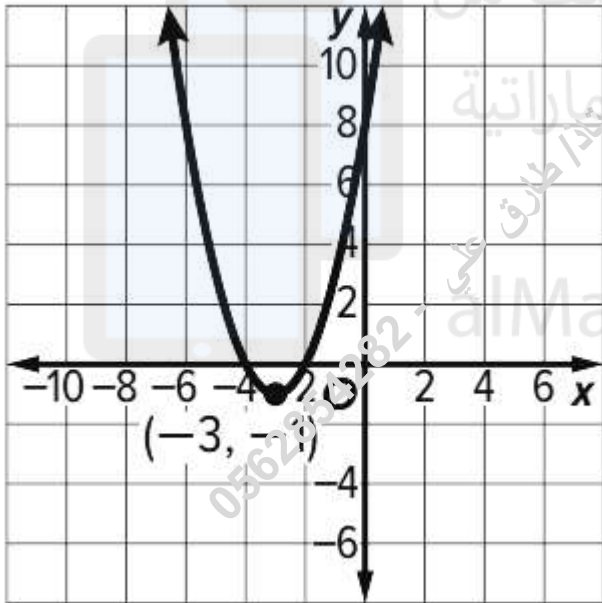


Graph each function. Then state the domain and range.

1. $f(x) = x^2 + 6x + 8$

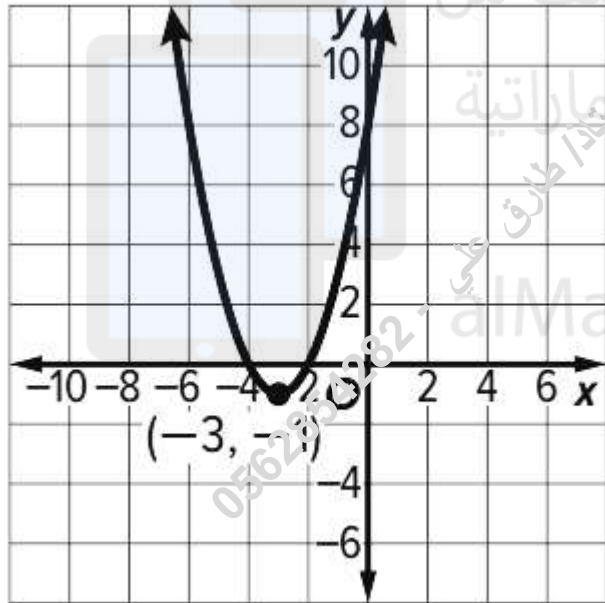
2. $f(x) = -x^2 - 2x + 2$

3. $f(x) = 2x^2 - 4x + 3$

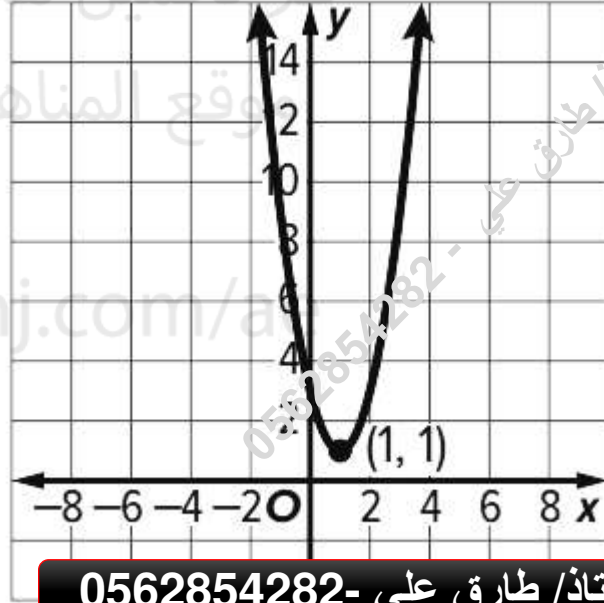


Graph each function. Then state the domain and range.

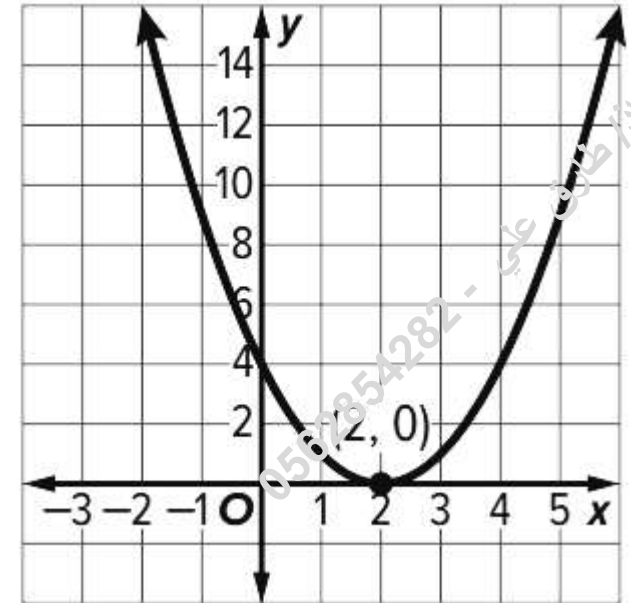
4. $f(x) = -2x^2$



5. $f(x) = x^2 - 4x + 4$



6. $f(x) = x^2 - 6x + 8$



Solve each equation by factoring. Check your solution.

1. $6x^2 - 2x = 0$

2. $x^2 = 7x$

3. $20x^2 = -25x$

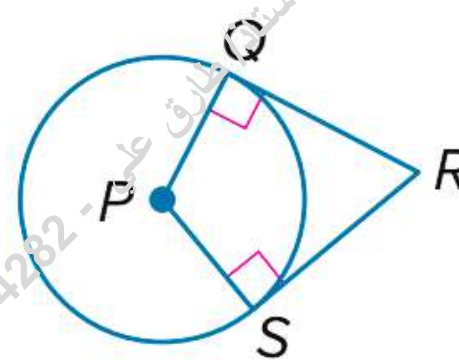
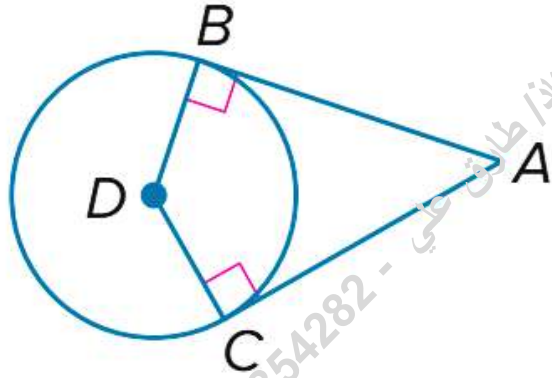
4. $x^2 + x - 30 = 0$

5. $x^2 + 14x + 33 = 0$

6. $x^2 - 3x = 10$

Show Your Steps

19. If $m\angle BDC = 12x^\circ$ and $m\angle A = (4x + 4)^\circ$, find $m\angle A$.
20. If $m\angle QPS = (15x + 8)^\circ$ and $m\angle R = (10x - 3)^\circ$, find $m\angle R$.



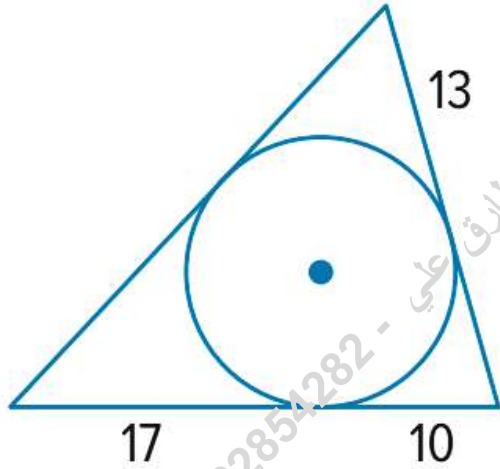
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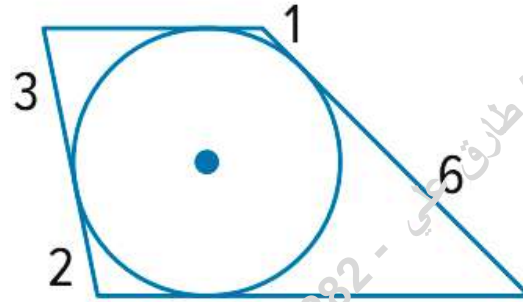
Each polygon is circumscribed about a circle. Find the perimeter of each polygon.

Show Your Steps

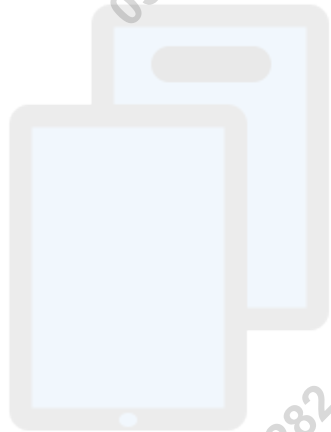
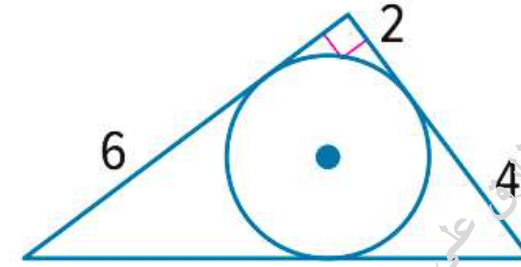
21.



22.



23.



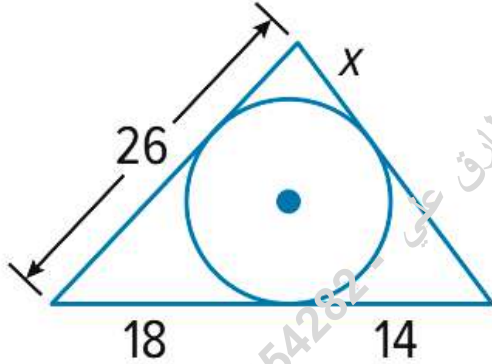
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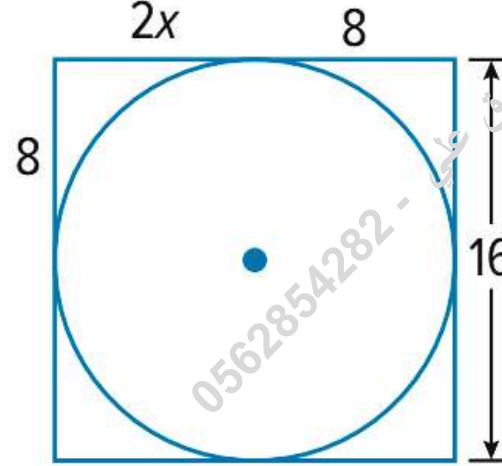
Show Your Steps

Each polygon is circumscribed about a circle. Find the value of x . Then find the perimeter of each polygon.

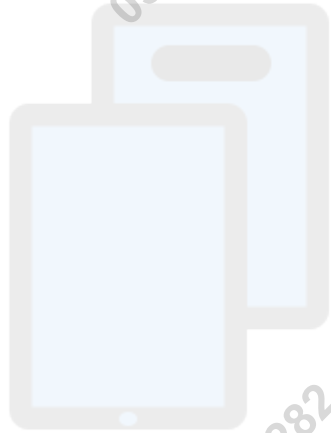
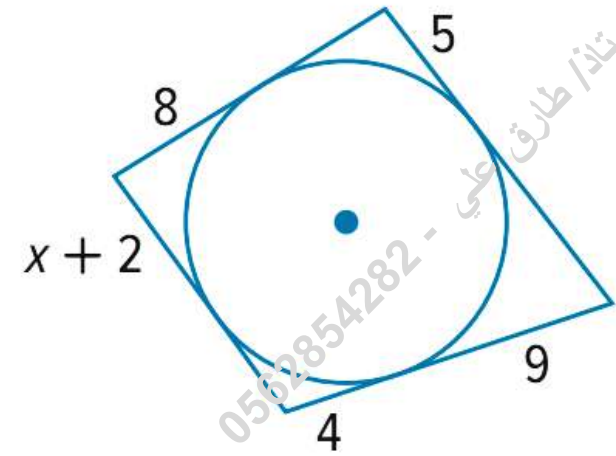
24.



25.



26.



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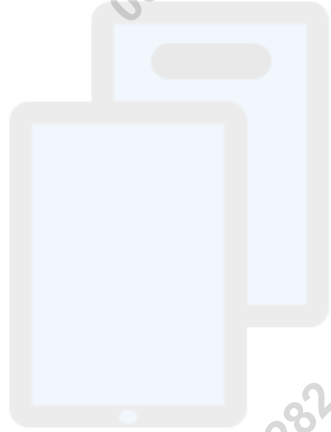
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Determine the average rate of change of $f(x)$ over the specified interval.

Show Your Steps

13. $f(x) = x^2 - 10x + 5$; interval $[-4, 4]$

14. $f(x) = 2x^2 + 4x - 6$; interval $[-3, 3]$



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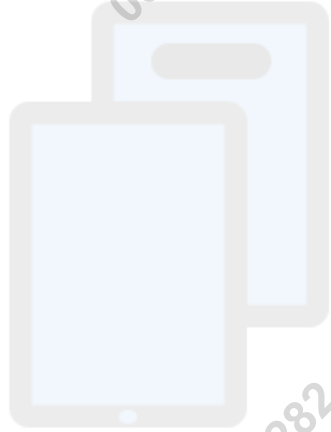
Determine the average rate of change of $f(x)$ over the specified interval.

15. $f(x) = 3x^2 - 3x + 1$; interval $[-5, 5]$

16. $f(x) = 4x^2 + x + 3$; interval $[-2, 2]$

17. $f(x) = 2x^2 - 11$; interval $[-3, 3]$

18. $f(x) = -2x^2 + 8x + 7$; interval $[-4, 4]$



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Determine the average rate of change of $f(x)$ over the specified interval.

Show Your Steps

19. interval $[-3, 3]$

x	$f(x)$
-3	0
-2	3
-1	-4
0	-3
1	0
2	5
3	12

20. interval $[-4, 4]$

x	$f(x)$
-4	-27
-2	-3
0	5
2	-3
4	-27

21. interval $[-2, 2]$

x	$f(x)$
-2	-3
-1	-3
0	-1
1	3
2	9

22. interval $[-5, 5]$

x	f(x)
-5	-39
-3	-15
-1	1
0	6
1	9
3	9
5	1

23. interval $[-3, 3]$

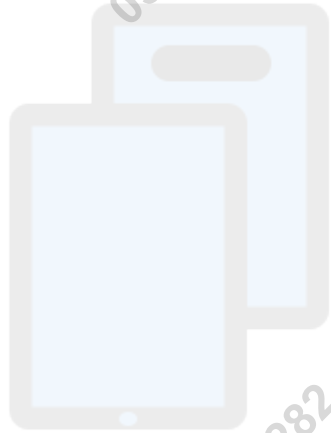
x	f(x)
-3	27
-2	12
-1	3
0	0
1	3
2	12
3	27

24. interval $[-2, 2]$ Show Your Steps

x	f(x)
-2	12
-1	5
0	0
1	-3
2	-4

5. **PHONE NUMBERS** What is the probability that a 7-digit telephone number generated using the digits 2, 3, 2, 5, 2, 7, and 3 is the number 222-3357?

Show Your Steps

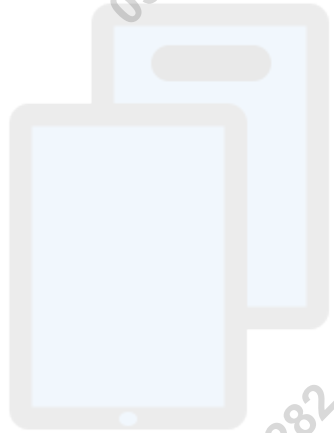


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6. **IDENTIFICATION** A store randomly assigns their employees work identification numbers to track productivity. Each number consists of 5 digits ranging from 1–9. If the digits cannot repeat, find the probability that a randomly generated number is 25938.

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Class President Finalists

Alan Shepherd

Chaminade Hudson

Denny Murano

Kelli Baker

Tanika Johnson

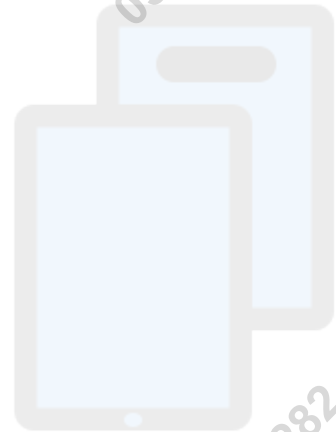
Jerome Murdock

Marlene Lindeman

7. **STUDENT COUNCIL** The table shows the finalists for class president. The order in which they will give their speeches will be chosen randomly.

- a. What is the probability that Denny, Kelli, and Chaminade are the first 3 speakers, in any order?
- b. What is the probability that Denny is first, Kelli is second, and Chaminade is third?

Show Your Steps



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Mr Tarek Ali

هیکل 10 متقدم ریفیل

رياضيات 2023

4-6

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