

تم تحميل هذا الملف من موقع المناهج الإماراتية



## تجميع أسئلة مراجعة وفق الهيكل الوزاري حسب منهج ريفيل

موقع المناهج ← المناهج الإماراتية ← الصف العاشر المتقدم ← تربية اسلامية ← الفصل الثاني ← ملفات متنوعة ← الملف

تاريخ إضافة الملف على موقع المناهج: 2025-03-04 13:25:46

ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل  
منهج انجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي للمدرس

المزيد من مادة  
تربية اسلامية:

إعداد: عصام الدبايه

## التواصل الاجتماعي بحسب الصف العاشر المتقدم



صفحة المناهج  
الإماراتية على  
فيسبوك

الرياضيات

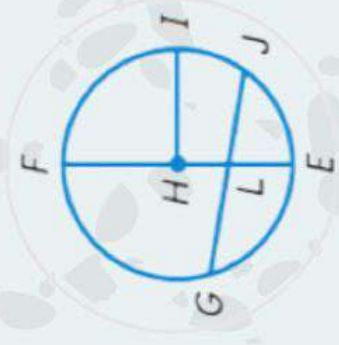
اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

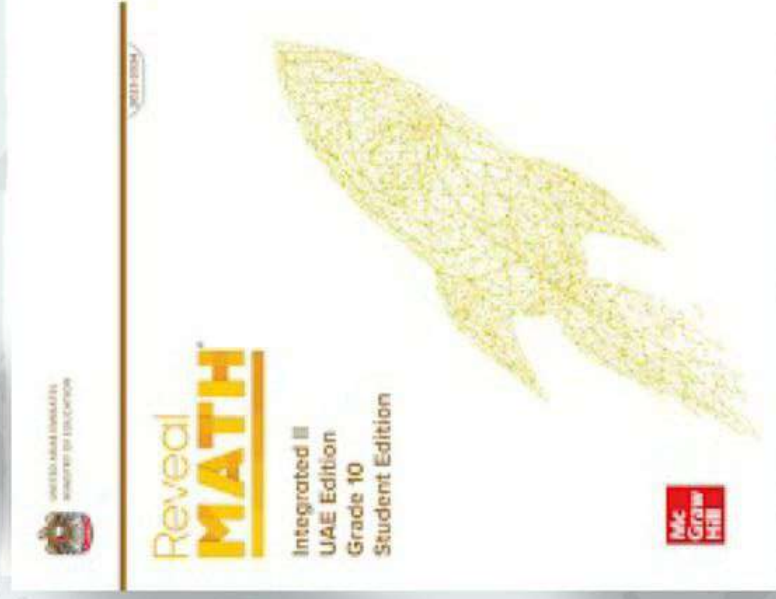
المزيد من الملفات بحسب الصف العاشر المتقدم والمادة تربية اسلامية في الفصل الثاني



MATH DEF.

ملف وفيديوهايات أسئلة الريبيل  
عاشر متقدم فصل ثاني .

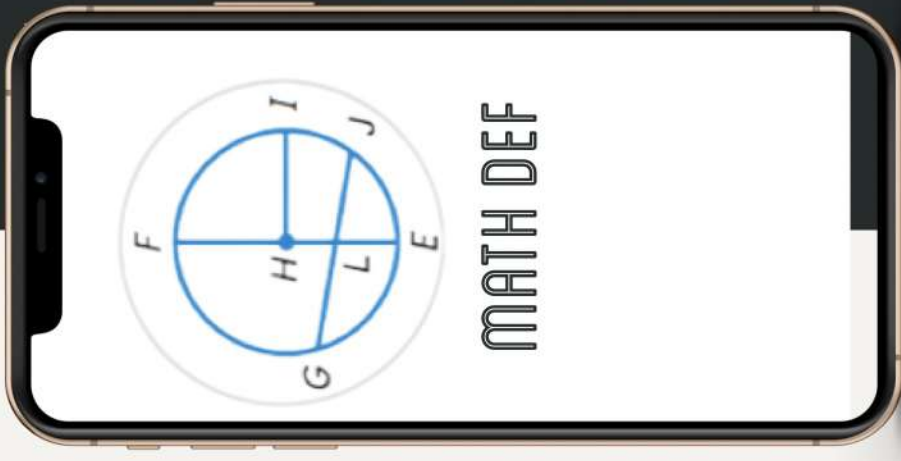
Eot2 - Math .



عمام  
البدبايبه

# كود بقائمة التشغيل الخاصة بالفيديوهات .

REVEAL

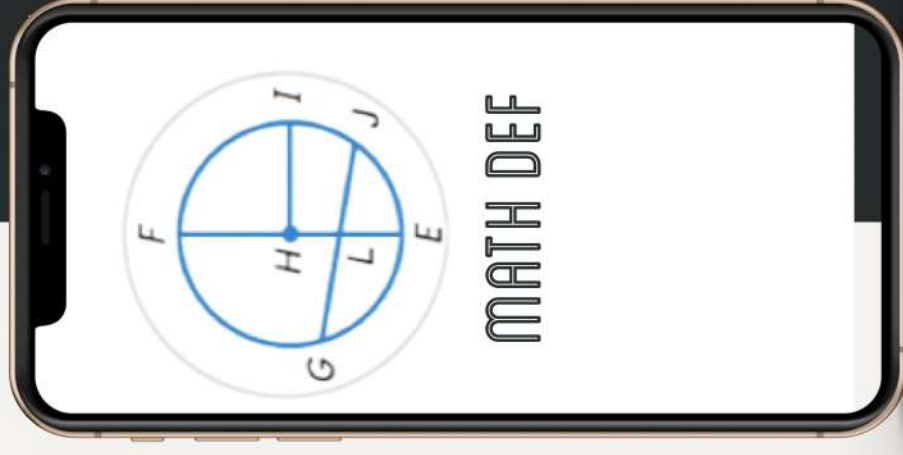


الديبايبيه  
عصام

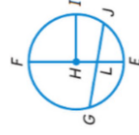
M C Q .

60 MARKS .

4 MARKS / QUESTION .



عصام الدين يايبه .



Eot2- Grade 10 adv.

Math DEF.

Issam al Dabaibeh.

1. Solve problems involving the circumference of a circle.

MCQ

Page 230.

a. Zack is designing wheels for a concept car. The diameter of the wheel is 18 inches. Zack wants to make spokes in the wheel that run from the center of the wheel to the rim. In other words, each spoke is a radius of the wheel. How long are these spokes?

b. Taiga wants to make a circular hoop that he can twirl around his body for exercise. He will use a tube that is 2.5 meters long.

1. What will be the diameter of Taiga's exercise hoop? Round your answer to the nearest thousandth of a meter.

2. What will be the radius of Taiga's exercise hoop? Round your answer to the nearest thousandth of a meter.

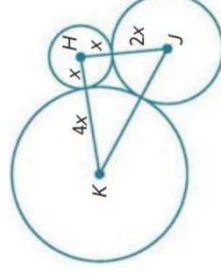
c. Three identical circular coins are lined up in a row as shown. The distance between the centers of the first and third coins is 3.2 centimeters. What is the radius of one of these coins?



e. How can we describe the relationships that exist between circles and line segments?

d. Kathy slices through a circular cake. The cake has a diameter of 14 inches. The slice that Kathy made is straight and has a length of 11 inches. Did Kathy cut along a radius, a diameter, or a chord of the circle?

g. The sum of the circumferences of circles H, J, and K shown at the right is  $56\pi$  units. Find KJ.





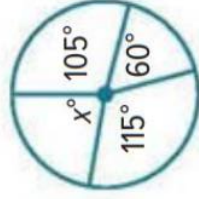


2. Measuring angles and arcs.

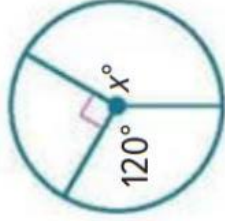
MCQ

1. Find the value of  $x$ .

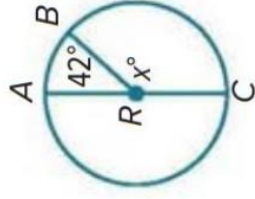
a.



b.

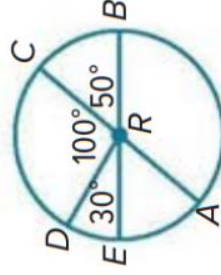


c.



2. AC and EB are diameters of R.

identify each arc as a major arc, minor arc, or semicircle. Then find its measure.



a.  $m\widehat{EA}$

b.  $m\widehat{CB}$

c.  $m\widehat{DC}$

d.  $m\widehat{DEB}$

e.  $m\widehat{AB}$

f.  $m\widehat{CDA}$

3. PR and QT are diameters of A. Find each measure.

a.

$m\widehat{UPQ}$

b.

$m\widehat{PQR}$

c.

$m\widehat{UTS}$

d.

$m\widehat{RS}$

e.

$m\widehat{PQS}$

f.

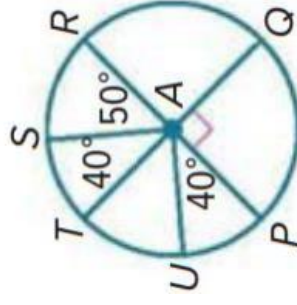
$m\widehat{PRU}$

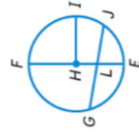
g.

$m\widehat{RSU}$

h.

$m\widehat{STP}$

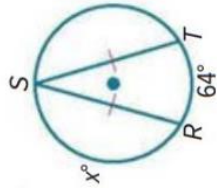




3. Arcs and chords . (find the value of x)

MCQ

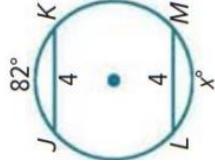
1.



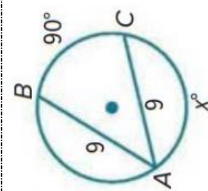
2.



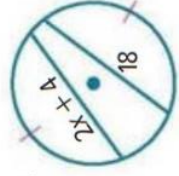
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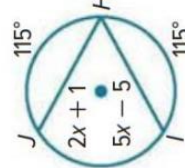
4.



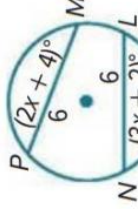
5.



6.

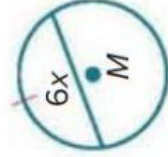


7.



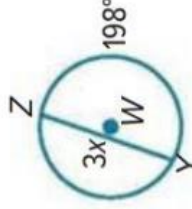
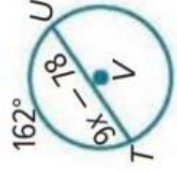
8.

$\odot M \cong \odot P$



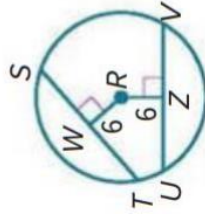
9.

$\odot V \cong \odot W$



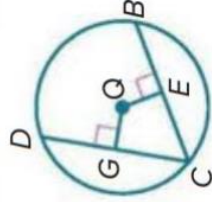
10.

In  $\odot R$ ,  $TS = 21$  and  $UV = 3x$ . What is the value of  $x$ ?



11.

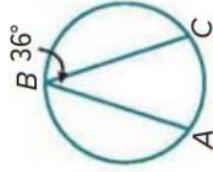
In  $\odot Q$ ,  $\overline{CD} \cong \overline{CB}$ ,  $GQ = x + 5$ , and  $EQ = 3x - 6$ . What is the value of  $x$ ?



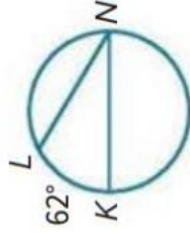


Find each measure.

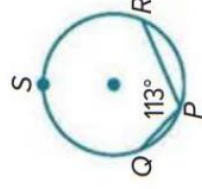
1.  $m\widehat{AC}$



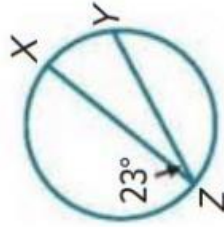
2.  $m\angle N$



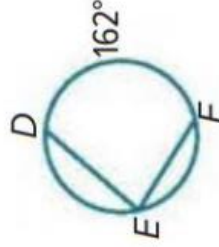
3.  $m\widehat{QSR}$



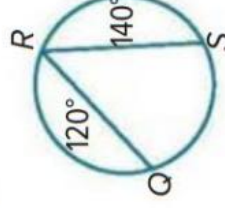
4.  $m\widehat{XY}$



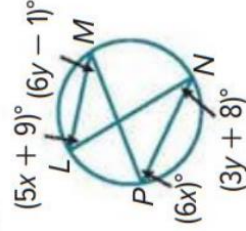
5.  $m\angle E$



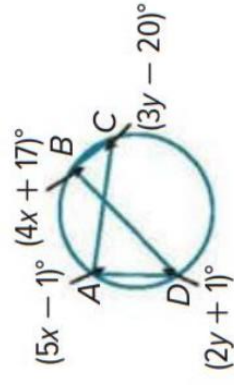
6.  $m\angle R$



7.  $m\angle N$



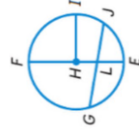
8.  $m\angle L$



9.  $m\angle C$

10.  $m\angle A$





5. Sample spaces .

MCQ

1. In a city basketball league, there must be a minimum of 14 players on a team's roster. One 14-player team has three centers, four power forwards, two small forwards, three shooting guards, and the rest of the players are point guards. How many different 5-player teams are possible if one player is selected from each position?

2. Tala wears a school uniform that consists of a skirt or pants, a white shirt, a blue jacket or sweater, white socks, and black shoes. She has 3 pairs of pants, 3 skirts, 6 white shirts, 2 jackets, 2 sweaters, 6 pairs of white socks, and 3 pairs of black shoes.

3. A sandwich shop provides its customers with a number of choices for bread, meats, and cheeses. Provided one item from each category is selected, how many different sandwiches can be made?

Bread	Meats	Cheeses
White	Turkey	American
Wheat	Ham	Swiss
Whole Grain	Roast Beef	Provolone
	Chicken	Colby-Jack
		Muenster

4. One state requires license plates to consist of three letters followed by three numbers. The letter "O" and the number "0" may not be used, but any other combination of letters or numbers is allowed. How many different license plates can be created?

5. Jack has been offered a number of internships that could occur in 3 different months, in 4 different departments, and for 3 different companies. Jack is only available to complete his internship in July. How many different outcomes are there for his internship?

6. Angelica is comparing vacation prices in Boulder, Colorado, and Sarasota, Florida. In Boulder, she can choose a 1- or 2-week stay in a 1- or 2-bedroom suite. In Sarasota, she can choose a 1-, 2-, or 3-week stay in a 2- or 3-bedroom suite, on the beach or not.

a. How many outcomes are available in Boulder?

b. How many outcomes are available in Sarasota?

c. How many total outcomes are available?

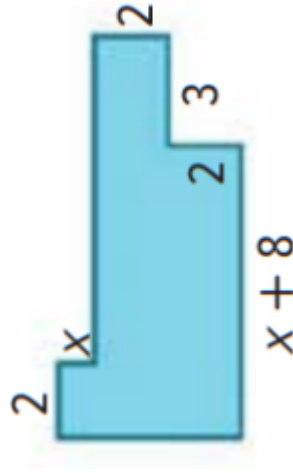


Eot2- Grade 10 adv.

Math DEF.

Issam al Dabaibeh.

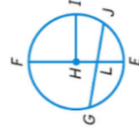
7. List six different expressions that could be used to evaluate the area of the composite figure.



8. Maurice packs suits, shirts, and ties that can be mixed and matched. Use his packing list to draw a tree diagram to represent the sample space for possible suit combinations using one article from each category.

#### Maurice's Packing List

1. Suits: Gray, black, khaki
2. Shirts: White, light blue
3. Ties: Striped (But optional)



6. Probability and counting.

MCQ

1. 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?

2. 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?

3. 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?

4. The Venn diagram shows the cast members who are in Acts I and II of a school play. One of the students will be chosen at random to attend a statewide performing arts conference. Let A be the event that a cast member is in Act I of the play and let B be the event that a cast member is in Act II of the play.



a. Find Z

b. What is the probability that the student who is chosen to attend the conference is a cast member in only one of the two Acts of the play?

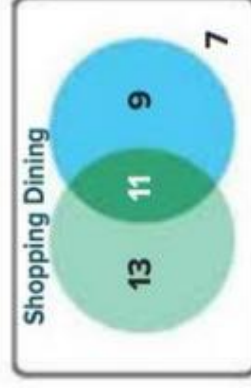
5. At Riverview High School, 120 students were asked whether they prefer a lion or a timber wolf as the new school mascot. What is the probability that a randomly-selected student will have voted for a lion as the new school mascot?

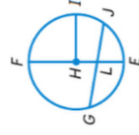
	Votes
Lion	78
Timber Wolf	42
Total	120

6. LaRae is playing a game that uses a spinner. What is the probability that the spinner will land on a prime number on her next spin?



7. Raya asks 40 people outside the mall whether or not they visited for shopping or dining. She records the results in a Venn diagram. One person will be chosen at random to be interviewed on the local evening news. Find the probability that the person chosen will be someone who visited the mall for shopping and dining.





7. Probability and multiplication rule.

MCQ

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

- |   |  |  |   |
|---|--|--|---|
| 1. 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. | 2. An ace is drawn from a standard deck of 52 cards, and is not replaced. Then, a second ace is drawn. | 3. 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. | 4. You roll two fair dice and roll a 5 on each. |
|---|--|--|---|

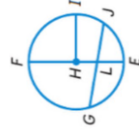
- |   |   |   |
|---|---|---|
| 5. Omari has two pairs of red socks and two pairs of white socks in a drawer. He has a drawer with 2 red T-shirts and 1 white T-shirt. If he randomly chooses a pair of socks from the sock drawer and a T-shirt from the T-shirt drawer, what is the probability that he gets a pair of red socks and a white T-shirt? | 6. Phyllis drops a penny in a pond, and then she drops a nickel in the pond. What is the probability that both coins land with tails showing? | 7. A die is rolled and a penny is flipped. Find the probability of rolling a two and landing on a tail. |
|---|---|---|

- |   |  |  |
|---|--|--|
| 8. A bag contains 3 red marbles, 2 green marbles, and 4 blue marbles. A marble is drawn randomly from the bag and replaced before a second marble is chosen. Find the probability that both marbles are blue. | 9. The forecast predicts a 40% chance of rain on Tuesday and a 60% chance on Wednesday. If these probabilities are independent, what is the chance that it will rain on both days? | 10. 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? |
|---|--|--|

11. 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. 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





8. Two-way frequency table.

MCQ

- The two-way frequency table compares data about students in a class who completed or did not complete homework and those who passed or did not pass an exam. How many students completed their homework and passed the exam? Identify whether marginal or joint frequencies are used.

	Completed Homework	Did Not Complete Homework	Totals
Passed Exam	18	2	20
Did Not Pass Exam	4	2	6
Totals	22	4	26

- Raquel surveys 160 people to determine if they prefer drama or comedy movies. The relative frequency table shows the data collected from the survey. Determine whether gender is independent of movie type preference. Explain your reasoning

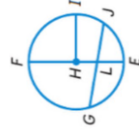
	Drama	Comedy	Totals
Male	12.5%	25%	37.5%
Female	46.9%	15.6%	62.5%
Totals	59.4%	40.6%	100%

- For a business report on technology use, Darnell asks a random sample of 72 shoppers whether they own a smartphone and whether they own a tablet computer. His survey shows that out of 51 shoppers who own smart phones, 9 of them also own a tablet, while out of 21 shoppers who do not own smart phones, 15 of them do not own tablets either. Find the conditional probability that a shopper has a tablet, given that he or she has a smart phone. Justify your reasoning.

- Paz asks a random sample of seniors at her high school whether they own a car and whether they have a job. The results of the survey are shown in the two-way relative frequency table. Paz says that the conditional probability that a student has a job given that he or she has a car is 46.7%. Do you agree? Justify your argument.

	Has a Job	Does Not Have a Job	Totals
Has a Car	21.9%	12.5%	34.4%
Does Not Have a Car	25%	40.6%	65.6%
Totals	46.9%	53.1%	100%





**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.**  $2x - 5y = 10$

$$3x + y = 15$$

**4.**  $3x + y = -2$

$$6x + 2y = 10$$

**5.**  $x + 2y = 5$

$$3x - 15 = -6y$$

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

$$x + y = 6$$



Eot2- Grade 10 adv.

Math DEF.

Issam al Dabaibeh.

Solve the system of equation by graphing.

$$\begin{aligned} 7. \quad x - 2y &= 0 \\ y &= 2x - 3 \end{aligned}$$

$$\begin{aligned} 8. \quad -4x + 6y &= -2 \\ 2x - 3y &= 1 \end{aligned}$$

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

$$\begin{aligned} 10. \quad y - x &= 3 \\ y &= 1 \end{aligned}$$

$$\begin{aligned} 11. \quad 2x - 3y &= 0 \\ 4x - 6y &= 3 \end{aligned}$$

$$\begin{aligned} 12. \quad 5x - y &= 4 \\ -2x + 6y &= 4 \end{aligned}$$



Use substitution .

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

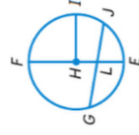
$$\begin{aligned} 2. \quad & 2x - y = 7 \\ & 6x - 3y = 14 \end{aligned}$$

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

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

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

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



Eot2- Grade 10 adv.

Math DEF.

Issam al Dabaibeh.

Use elimination.

$$\begin{aligned} 9. \quad & 3x - 2y = 4 \\ & 5x + 3y = -25 \end{aligned}$$

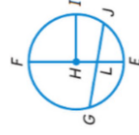
$$\begin{aligned} 11. \quad & 7x + 2y = -1 \\ & 21x + 6y = -9 \end{aligned}$$

$$\begin{aligned} 10. \quad & 5x + 2y = 12 \\ & -6x - 2y = -14 \end{aligned}$$

$$\begin{aligned} 12. \quad & 3x - 5y = -9 \\ & -7x + 3y = 8 \end{aligned}$$

$$\begin{aligned} 13. \quad & x - 3y = -12 \\ & 2x + y = 11 \end{aligned}$$

$$\begin{aligned} 14. \quad & 6w - 8z = 16 \\ & 3w - 4z = 8 \end{aligned}$$



Eot2- Grade 10 adv.

Math DEF.

Issam al Dabaibeh.

Cassandra and Alberto are selling pies for a fundraiser. Cassandra sold 3 small pies and 14 large pies for a total of \$203. Alberto sold 11 small pies and 11 large pies for a total of \$220. Determine the cost of each pie.

1. Write a system of equations and solve by using substitution.
2. What does the solution represent in terms of this situation?
3. How can you verify that the solution is correct?

Ms. Patel invested a total of \$825 in two stocks. At the time of her investment, one share of Stock A was valued at \$12.41 and a share of Stock B was valued at \$8.62. She purchased a total of 79 shares.

- a. Write a system of equations and solve by using substitution
- b. How many shares of each stock did Ms. Patel buy? How much did she invest in each of the two stocks?





11. system of equations in three variables .

MCQ

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.  $-2c = -6$

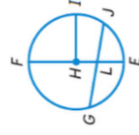
$2a + 3b - c = -2$

$a + 2b + 3c = 9$

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

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

$x + 2y = 0$



Eot2- Grade 10 adv.

Math DEF.

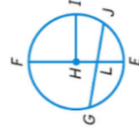
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A veterinarian wants to make a food mix for guinea pigs that contains 23 grams of protein, 6.2 grams of fat, and 16 grams of moisture. The composition of three available mixtures are shown in the table. How many grams of each mix should be used to make the desired new mix?

	Protein (g)	Fat (g)	Moisture (g)
Mix A	0.2	0.02	0.15
Mix B	0.1	0.06	0.10
Mix C	0.15	0.05	0.05

At the arcade, Marcos, Sara, and Darius played video racing games, pinball, and air hockey. Marcos spent \$6 for 6 racing games, 2 pinball games, and 1 game of air hockey. Sara spent \$12 for 3 racing games, 4 pinball games, and 5 games of air hockey. Darius spent \$12.25 for 2 racing games, 7 pinball games, and 4 games of air hockey. How much did each of the games cost?

A natural food store makes its own brand of trail mix from dried apples, raisins, and peanuts. A one-pound bag of the trail mix costs \$3.18. It contains twice as much peanuts by weight as apples. If a pound of dried apples costs \$4.48, a pound of raisins is \$2.40, and a pound of peanuts is \$3.44, how many ounces of each ingredient are contained in 1 pound of the trail mix?



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

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

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

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  $[-4, 4]$

19. interval  $[-3, 3]$

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

22. interval  $[-5, 5]$

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

20. interval  $[-4, 4]$

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

23. interval  $[-3, 3]$

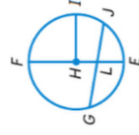
$x$	$f(x)$
-3	27
-2	12
-1	3
0	0
1	3
2	12
3	27

21. interval  $[-2, 2]$

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

24. interval  $[-2, 2]$

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

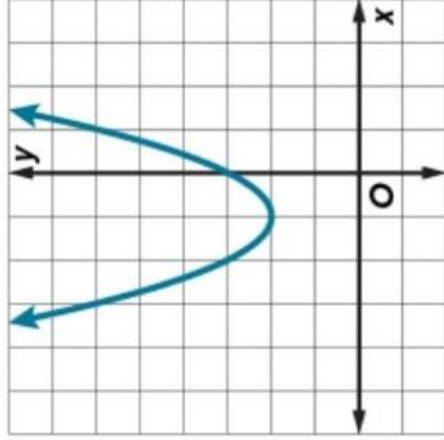


13. Solving quadratic equation by graphing .

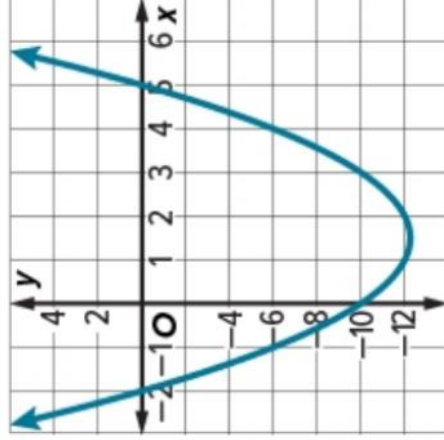
MCQ

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

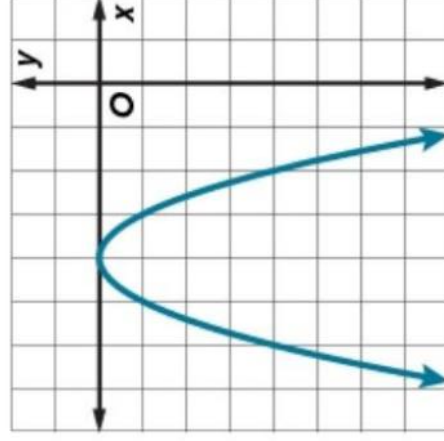
1.  $x^2 + 2x + 3 = 0$



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



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Solve each equation by graphing, if the exact roots cannot be found, state the consecutive integers between which the roots are located.

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

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

17.  $x^2 + 4x + 2 = 0$

18.  $-x^2 - 4x = 0$

19.  $-x^2 + 36 = 0$

20.  $x^2 - 6x + 4 = 0$

21.  $x^2 + 5x + 3 = 0$

22.  $x^2 - 7 = 0$

23.  $-x^2 - 4x - 6 = 0$

Use a quadratic equation to find two real numbers with a sum of 2 and a product.

Use a quadratic equation to find two real numbers

with a sum of -15 and a product of -54.





## 14. Graphing quadratic functions .

## MCQ

Find the values of x and y that make each equation true.

**19.**  $9 + 12i = 3x + 4yi$

**20.**  $x + 1 + 2yi = 3 - 6i$

**21.**  $2x + 7 + (3 - y)i = -4 + 6i$

**22.**  $5 + y + (3x - 7)i = 9 - 3i$

**23.**  $20 - 12i = 5x + (4y)i$

**24.**  $x - 16i = 3 - (2y)i$

Simplify.

**25.**  $(6 + i) + (4 - 5i)$

**26.**  $(8 + 3i) - (6 - 2i)$

**27.**  $(5 - i) - (3 - 2i)$

**28.**  $(-4 + 2i) + (6 - 3i)$

**29.**  $(6 - 3i) + (4 - 2i)$

**30.**  $(-11 + 4i) - (1 - 5i)$

**31.**  $(2 + i)(3 - i)$

**32.**  $(5 - 2i)(4 - i)$

**33.**  $(4 - 2i)(1 - 2i)$



**34. ELECTRICITY** Using the formula  $V = CI$ , find the voltage  $V$  in a circuit when the current  $C = 3 - j$  amps and the impedance  $I = 3 + 2j$  ohms.

**Simplify.**

**35.**  $\frac{5}{3+i}$

**36.**  $\frac{7-13j}{2i}$

**37.**  $\frac{6-5i}{3i}$



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15. Graphing quadratic functions .

MCQ

Page10.

$$15. x^2 = 64$$

$$16. x^2 - 100 = 0$$

$$17. 289 = x^2$$

$$18. x^2 + 14 = 50$$

$$19. x^2 - 169 = 0$$

$$20. 124 = x^2 + 3$$

$$21. 4x^2 - 28x + 49 = 0$$

$$22. 9x^2 + 6x = -1$$

$$23. 16x^2 - 24x + 13 = 4$$



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$$24. 81x^2 + 36x = -4$$

Math DEF.

$$25. 25x^2 + 80x + 64 = 0$$

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$$26. 9x^2 + 60x + 95 = -5$$

$$27. x^2 + 12 = -13$$

$$28. x^2 + 100 = 0$$

$$29. x^2 = -225$$

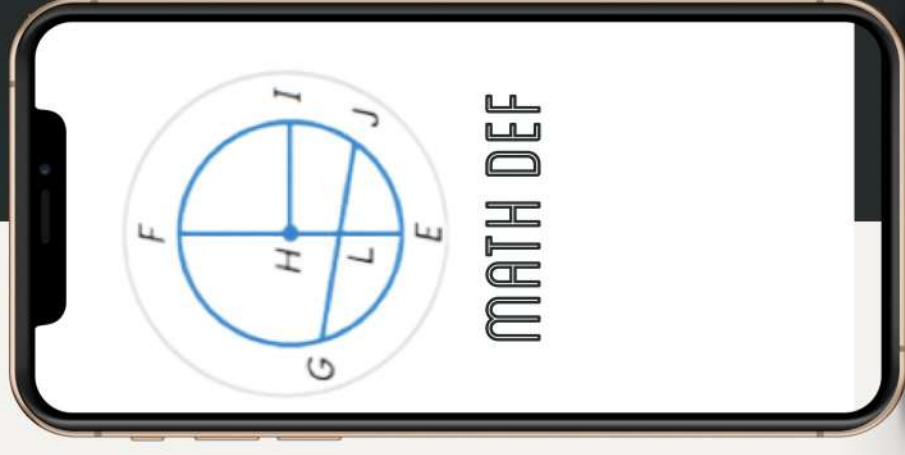
$$30. x^2 + 4 = 0$$

$$31. 36x^2 = -25$$

$$32. 64x^2 = -49$$

F R Q .

40 MARKS .

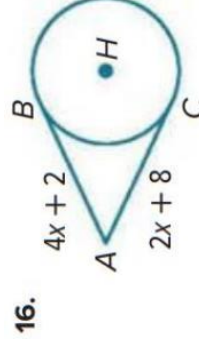
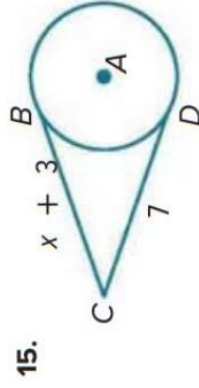
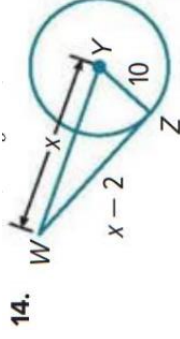
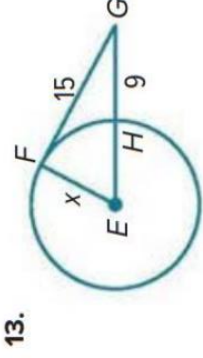
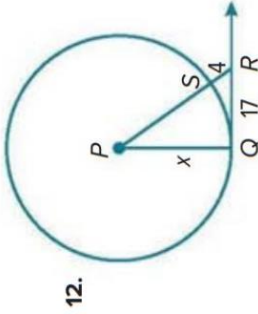
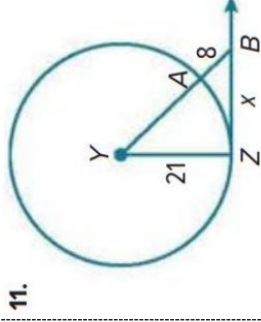
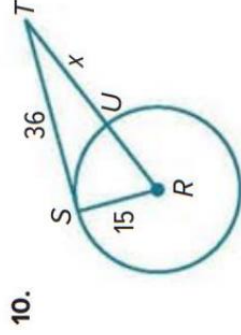
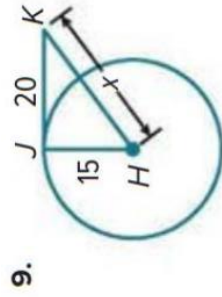


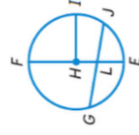
عصام الدين يابيه .





Find the value of  $x$ . assume that segments that appear to be tangent are tangent. Round your answer to the nearest hundredth, if needed.





## 17. Probability and the addition rule .

## FRQ

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?

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?

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?

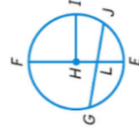
Age	Mason Sports Complex		
	Soccer	Volleyball	Basketball
14	28	36	42
15	30	26	33
16	35	41	29

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.

a. What is the probability of rolling a pair of two numbers that have a sum of seven?

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

b. What is the probability of rolling two numbers whose sum is an even number or not rolling a 2? Round to the nearest thousandth.)



### Eot2- Grade 10 adv.

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?

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

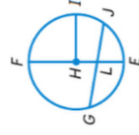
Erin is planning her summer garden. The table shows the number of bulbs she has according to type and color of flower. If Erin randomly selects one of the bulbs, what is the probability that she selects a bulb for a yellow flower or a dahlia?

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

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?

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.



**Eot2- Grade 10 adv.**

**Math DEF.**

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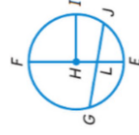
A blue marble is selected at random from a bag of 3 red and 9 blue marbles and not replaced. What is the probability that a second marble selected will be blue?

A die is rolled. If the number rolled is less than 5, what is the probability that it is the number 2?

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?

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.

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?



18. Probability with permutations and combinations .

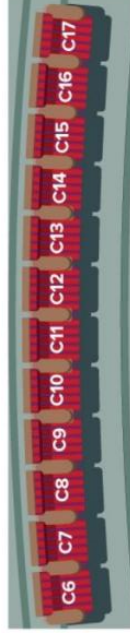
FRQ

The cheerleading squad is made up of 12 girls. A captain and a co-captain are selected at random. What is the probability that Chantel and Clover are chosen as leaders?

You have a textbook for each of the following subjects: Spanish, English, Chemistry, Geometry, History, and Psychology. If you choose 4 of these books at random to arrange on a shelf, what is the probability that the Geometry textbook will be first from the left and the Chemistry textbook will be second from the left?

Alfonso and Cordell each bought one raffle ticket at the state fair. If 50 tickets were randomly sold, what is the probability that Alfonso got ticket 14 and Cordell got ticket 23?

Nia and Ciro are going to a concert with their high school's key club. If they choose a seat in the row below at random, what is the probability that Ciro will be in seat C11 and Nia will be in C12?



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?

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.

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?

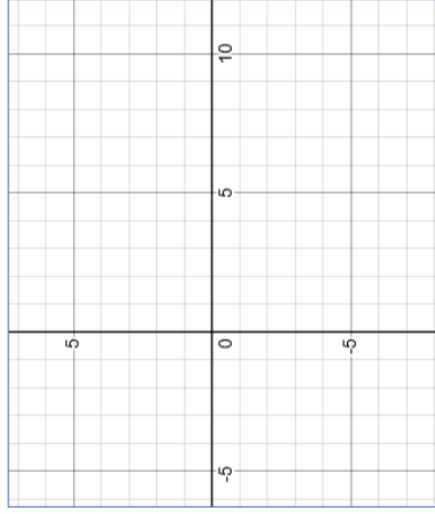
b. What is the probability that Denny is first, Kelli is second, and Chaminade is third?

Class President Finalists	
Alan Shephard	
Chaminade Hudson	
Denny Murano	
Kelli Baker	
Tanika Johnson	
Jerome Murdock	
Marlene Lindeman	

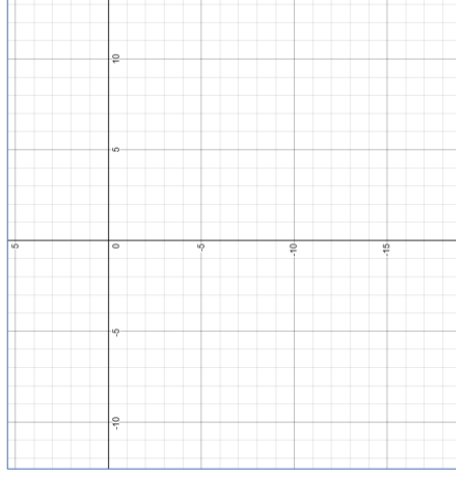


**Solve each equation by graphing.**

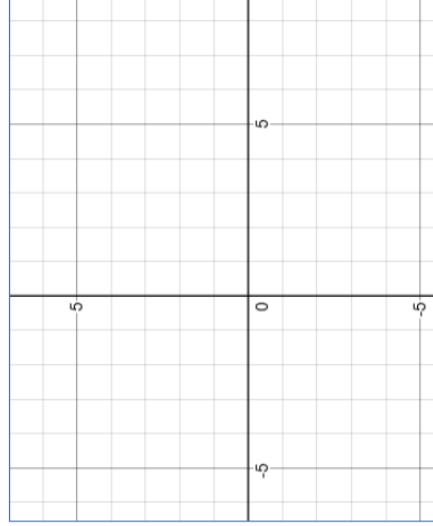
1.  $|x - 4| = 5$



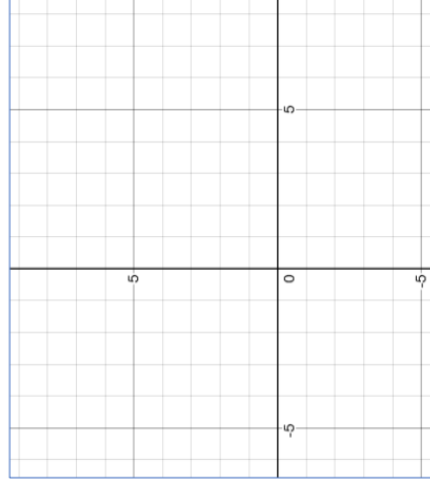
2.  $|2x - 3| = 17$



3.  $3 + |2x + 1| = 3$



4.  $|x - 1| + 6 = 4$





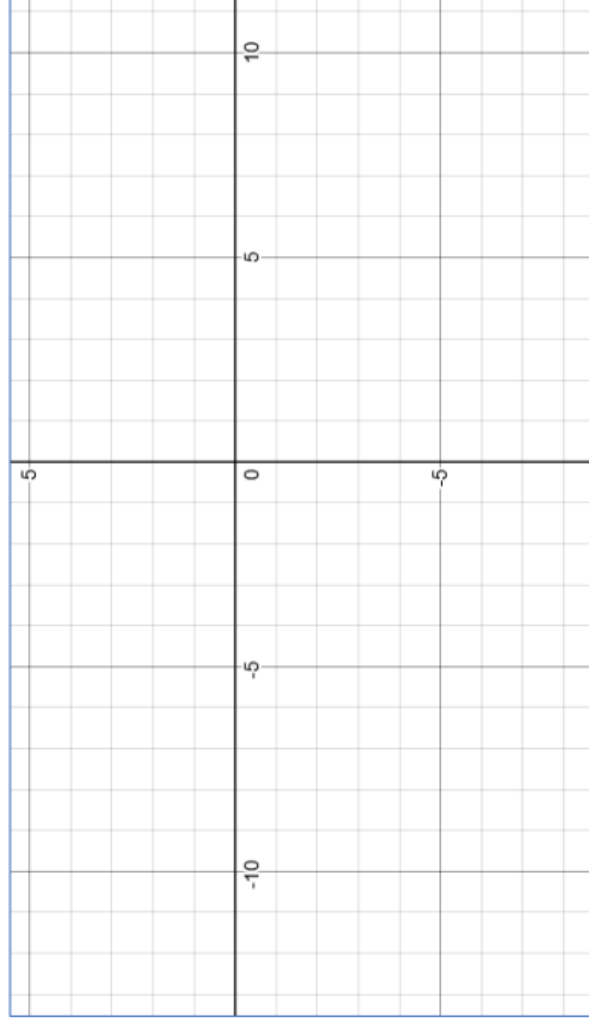
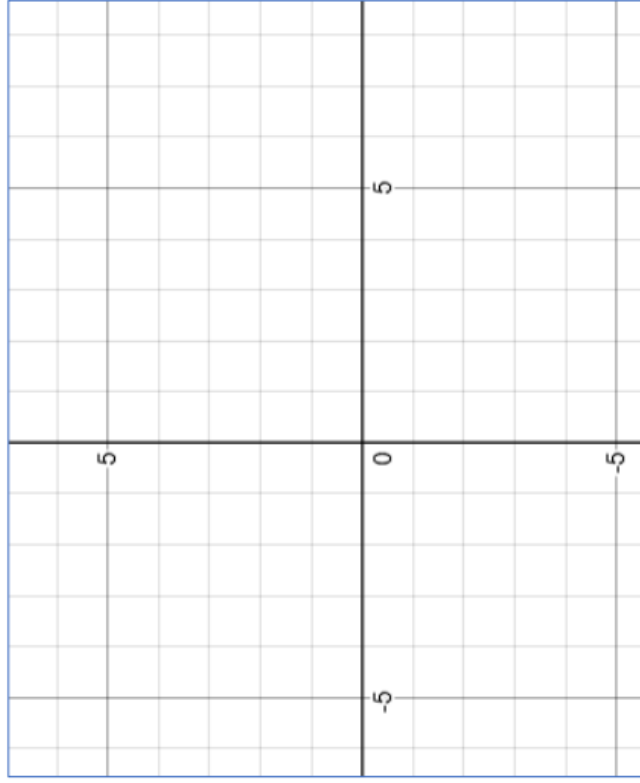
Eot2- Grade 10 adv.

**5.**  $7 + |3x - 1| = 7$

Math DEF.

**6.**  $|x + 2| + 5 = 13$

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## 20. Using the quadratic formula and the discriminant

FRQ

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Find the value of the discriminant for each quadratic equation. Then describe the number and type of roots for the equation.

24.  $x^2 - 8x + 16 = 0$

25.  $x^2 - 11x - 26 = 0$

26.  $3x^2 - 2x = 0$

27.  $20x^2 + 7x - 3 = 0$

28.  $5x^2 - 6 = 0$

29.  $x^2 - 6 = 0$

30.  $x^2 + 8x + 13 = 0$

31.  $5x^2 - x - 1 = 0$

32.  $x^2 - 2x - 17 = 0$

33.  $x^2 + 49 = 0$

34.  $x^2 - x + 1 = 0$

35.  $2x^2 - 3x = -2$