

## ملزمة أسئلة القسم الالكتروني وفق الهيكل الوزاري منهج ريفيل



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المزيد من مادة  
رياضيات:

إعداد: Dsouza Daryl Justin

### 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 رياضيات في الفصل الثاني

أسئلة الامتحان النهائي القسم الورقي منهج بريدج

1

حل بالخطوات أسئلة امتحان نهائي سابق منهج بريدج القسم الالكتروني

2

حل النموذج التدريبي للاختبار النهائي وفق الهيكل الوزاري منهج بريدج

3

النموذج التدريبي للاختبار النهائي وفق الهيكل الوزاري منهج بريدج

4

حل بالخطوات أسئلة امتحان نهائي سابق منهج ريفيل القسم الورقي

5



# ***G10Adv EoT2 Practice Exam I***

## ***Part I Electronic (MCQ)***



10Adv Part 1 Multiple Choice | MCQ | EoT2 | Circle, probability, equations & quadratics | Q1 - Q15 |

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[https://youtu.be/ m9i0mH8EXU](https://youtu.be/m9i0mH8EXU)



Let's Start!



**Question 1:** Use trigonometric identities to simplify expressions.

- 1) 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?

- A) 21 units
- B) 24 units
- C) 30 units
- D) 44 units

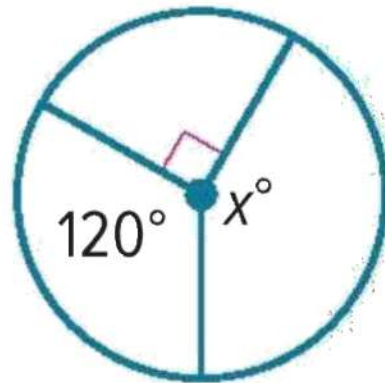


- 2) Kathy slices through a circular cake. The cake has a diameter of 14 inches. The slice that Kathy made is straight and has a length of 11 inches. Did Kathy cut along a radius, a diameter, or a chord of the circle?
- A) Diameter
  - B) Chord
  - C) Secant
  - D) Tangent

**Question 2: Measuring Angles and Arcs.**

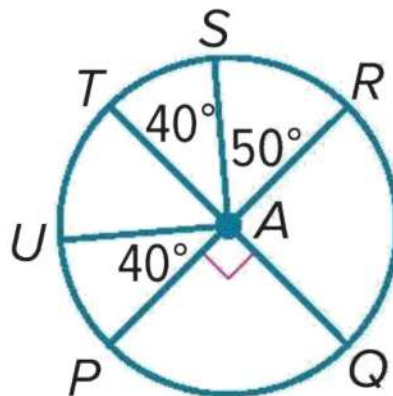
1) Find the value of  $x$ .

- A)  $125^\circ$
- B)  $150^\circ$
- C)  $200^\circ$
- D)  $250^\circ$



2)  $\overline{PR}$  and  $\overline{QT}$  are diameters of  $\odot A$ . Find the measure of  $\widehat{RSU}$ .

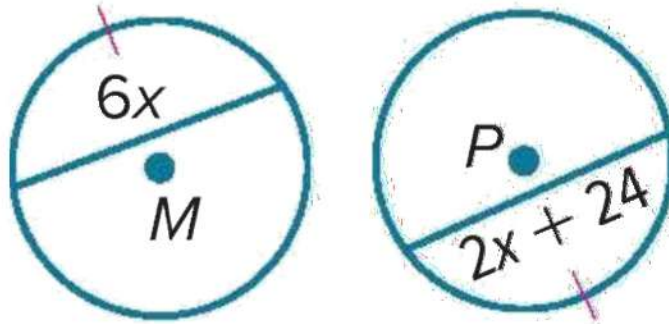
- A)  $125^\circ$
- B)  $140^\circ$
- C)  $220^\circ$
- D)  $280^\circ$



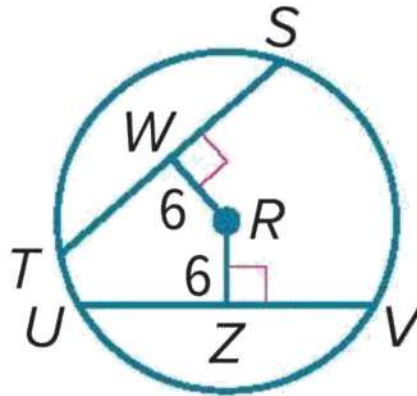
**Question 3: Arcs and Chords.**

1)  $\odot M \cong \odot P$

- A) 1
- B) 2
- C) 4
- D) 6

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

- A) 2.5
- B) 5.5
- C) 7
- D) 9

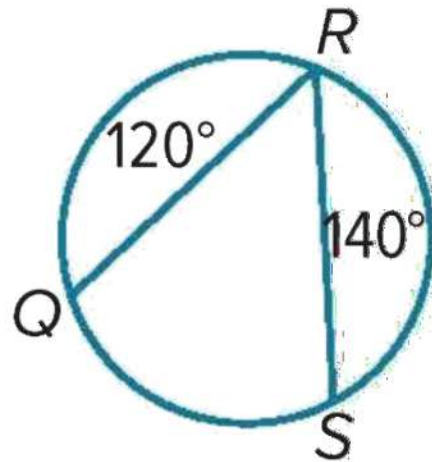




**Question 4: Inscribed Angles.**

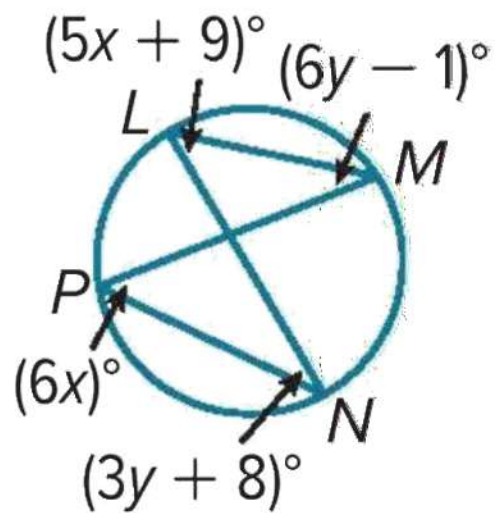
1) Find the measure of  $\angle R$

- A)  $31^\circ$
- B)  $46^\circ$
- C)  $50^\circ$
- D)  $72^\circ$



2) Find the measure of  $\angle N$

- A)  $17^\circ$
- B)  $43^\circ$
- C)  $54^\circ$
- D)  $89^\circ$



**Question 5: Sample Spaces.**

- 1) A sandwich shop provides its customer 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?

- A) 20  
B) 45  
C) 60  
D) 75

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

- 2) Jack has been offered several 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?

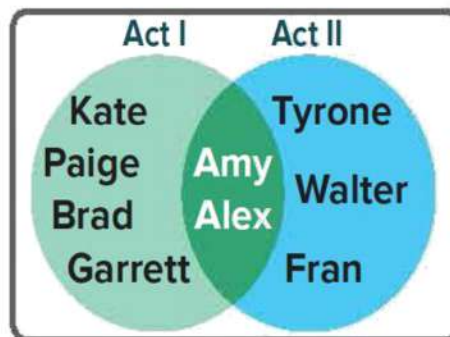
- A) 3  
B) 4  
C) 6  
D) 12

**Question 6: Probability and Counting.**

- 1) 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.

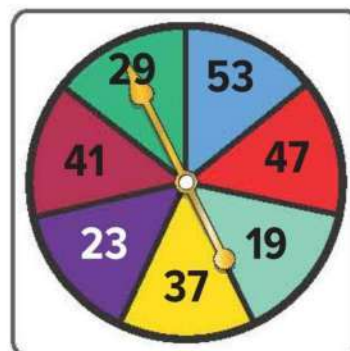
What is the probability that the student who is chosen to attend the conference is a cast member in only one of the two Acts of the play.

- A) 0.38  
B) 0.54  
C) 0.6  
D) 0.78



- 2) 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?

- A) 0.3  
B) 0.5  
C) 0.75  
D) 1





**Question 7: Probability and the Multiplication Rule.**

- 1) The table shows the colour 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

- A) 8%  
B) 12%  
C) 15%  
D) 20%

- 2) 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?

- A) 8%  
B) 12%  
C) 15%  
D) 20%

**Question 8: Two-Way Frequency Tables.**

1) 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.

- A) 18; marginal frequency
- B) 20; joint frequency
- C) 22; marginal frequency
- D) 18 joint frequency

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

2) For a business report on technology use, Darnell asks a random sample of 72 shoppers whether they own a smart phone 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 smartphone.

- A) 11.5%
- B) 17.7%
- C) 26.2%
- D) 55.1%

**Question 9: Solving Systems of Equations Graphically.**

- 1) Determine the number of solutions for each system. Then state whether the system of equation is consistent or inconsistent and whether it is independent or dependent.

$$y = 3x$$

$$y = -3x + 2$$

- A) 1; consistent and independent
- B) 1; inconsistent and dependent
- C) Infinite solutions; consistent and dependent
- D) No solution; inconsistent

- 2) Solve the system of equations

$$2x + y = 3$$

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

- A) (0, 3)
- B) (-3, 3)
- C) (3, -3)
- D) No solution

**Question 10: Solving Systems of Equations Algebraically.**

1) Use substitution to solve each system of equations.

$$2x - y = 9$$

$$x + 3y = -6$$

A) (0, 3)

B) (-3, 3)

C) (3, -3)

D) No solution

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

Write a system of equations and solve by substitution.

A) Stock A = 41 shares and Stock B = 38 shares

B) Stock A = 83 shares and Stock B = 14 shares

C) Stock A = 28 shares and Stock B = 31 shares

D) Stock A = 38 shares and Stock B = 41 shares



**Question 11: Systems of Equations in Three Variables.**

1) Solve the system of equations.

$$3s - t + u = 5$$

$$3s + 2t - u = 11$$

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

A)  $\left(-5, 2, \frac{2}{3}\right)$

B)  $\left(\frac{2}{3}, 2, -5\right)$

C) Infinitely many solutions

D) No solution

2) 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?

A) Mix A of 60 grams, Mix B of 50 grams, Mix C of 40 grams

B) Mix A of 60 grams, Mix B of 50 grams, Mix C of 40 grams

C) Mix A of 60 grams, Mix B of 50 grams, Mix C of 40 grams

D) Mix A of 60 grams, Mix B of 50 grams, Mix C of 40 grams



**Question 12: Graphing Quadratic Functions.**

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

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

A) 3

B) 4

C) 6

D) 8

2) interval  $[-4, 4]$

A) 0

B) 2

C) 5

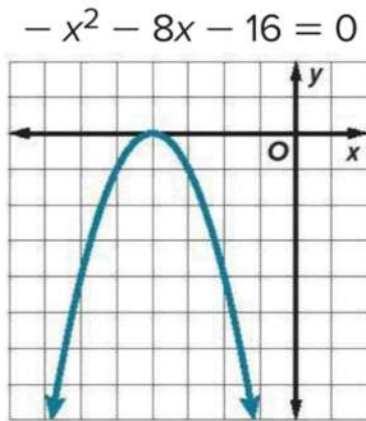
D) 10

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



**Question 13: Solving Quadratic Equations by Graphing.**

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



A) 0

B) -2

C) -4

D) -6

2) Solve the equation by graphing and find the exact roots.

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

A) 0 &amp; 2

B) 0 &amp; -4

C) 0 &amp; 4

D) No real roots

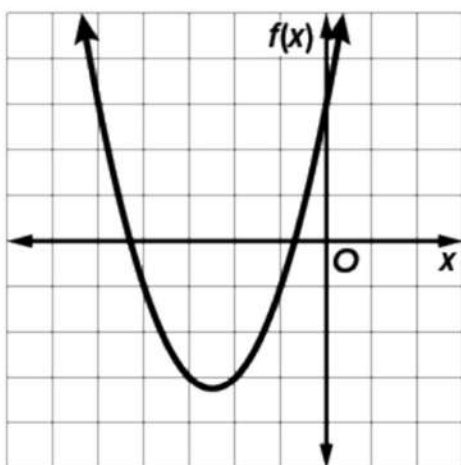


### Question 13: Solving Quadratic Equations by Graphing (Continued).

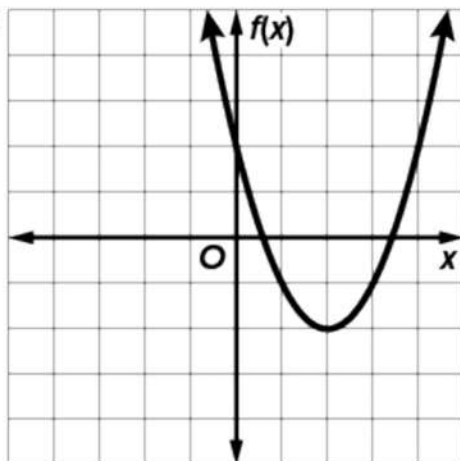
3) Solve the equation by graphing.

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

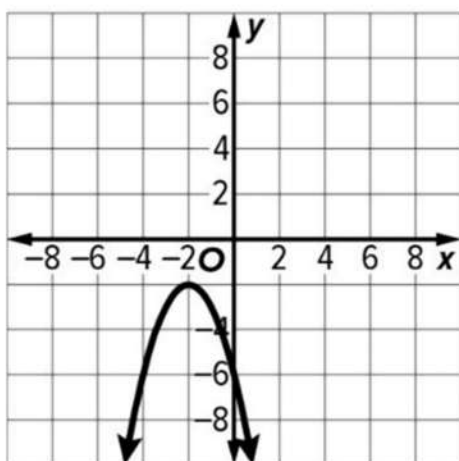
A)



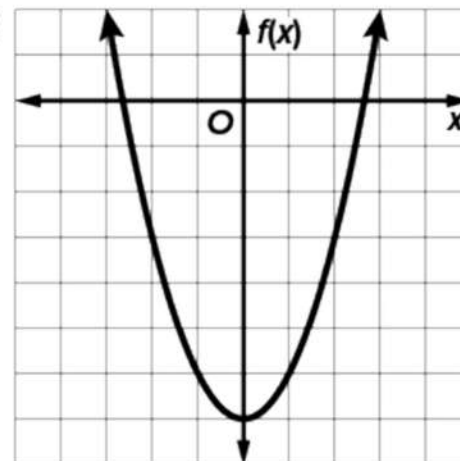
C)



B)



D)



**Question 14: Complex Number.**

1) Find the values of  $x$  and  $y$  that make the equation true.

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

A)  $x = 4, y = \frac{4}{3}$

B)  $x = \frac{3}{4}, y = 3$

C)  $x = 3, y = \frac{3}{4}$

D)  $x = \frac{4}{3}, y = 4$

2) Simplify  $\frac{6-5i}{3i}$

A)  $-\frac{13}{2} + \frac{7}{2}i$

B)  $-\frac{5}{3} - 2i$

C)  $\frac{3}{2} - \frac{1}{2}i$

D)  $11 + 3i$

**Question 15: Graphing Quadratic Functions.**

Solve each equation by factoring.

1)  $25x^2 + 80x + 64$

- A) 0
- B)  $-\frac{2}{9}$
- C)  $-\frac{8}{5}$
- D)  $\frac{3}{4}$

2)  $x^2 = -225$

- A) 0
- B)  $\pm 2i$
- C)  $\pm 5i$
- D)  $\pm 15$





# ***G10Adv EoT2 Practice Exam I***

## ***Part 2 Writing (FRQ)***



10Adv Part 2 Writing | FRQ | EoT2 | Circles, probability, parabolas & complex numbers | Q16 - Q21 |

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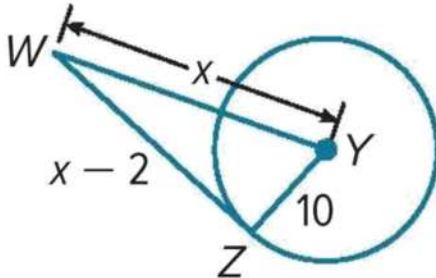


Let's Start!



**Question 16: Use properties of tangents.**

Find the value of  $x$ . Assume that the segments that appear to be tangent are tangent. Round your answer to the nearest hundredth.





### Question 17: Probability and the Addition Rule & Conditional Probability.

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



### **Question 18: Probability with Permutations and Combinations.**

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.



### Question 19: Solving Absolute Value Equations and Inequalities by Graphing.

Solve the equation by graphing.

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





**Question 20: Using the Quadratic Formula and the Discriminant.**

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

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