

## أوراق عمل الوحدة الثامنة coordinates Polar الإحداثيات القطبية منهج ريفيل



### تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ← المناهج الإماراتية ← الصف الحادي عشر المتقدم ← رياضيات ← الفصل الثالث ← ملفات متنوعة ← الملف

تاريخ إضافة الملف على موقع المناهج: 21:24:15 2025-04-21

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 رياضيات:

إعداد: Dsouza Daryl Justin

### التواصل الاجتماعي بحسب الصف الحادي عشر المتقدم



صفحة المناهج الإماراتية على فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

### المزيد من الملفات بحسب الصف الحادي عشر المتقدم والمادة رياضيات في الفصل الثالث

أوراق عمل درس الإحداثيات القطبية

1

حل أسئلة الامتحان النهائي القسم الالكتروني منهج ريفيل

2

أسئلة الامتحان النهائي القسم الورقي منهج بريدج

3

أسئلة الامتحان النهائي القسم الورقي منهج ريفيل

4

حل القسم الورقي من نموذج امتحاني وفق الهيكل الوزاري

5

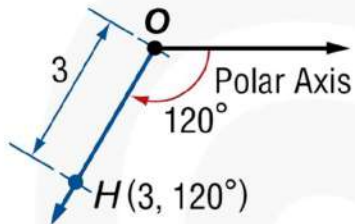


## Topic: Polar Coordinates 1

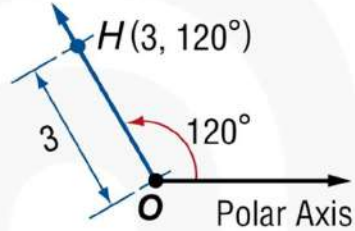
### Practice

Question 1: Select the correct graph for  $H(3, 120^\circ)$

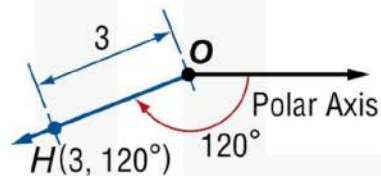
A.



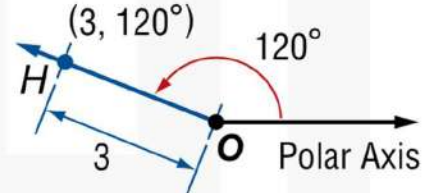
C.



B.

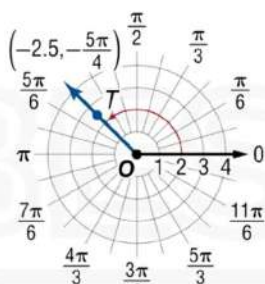


D.

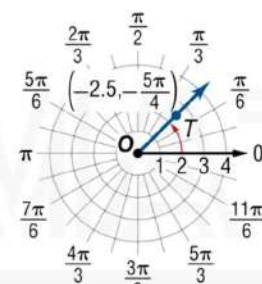


Question 2: Select the correct graph for  $T\left(-2.5, -\frac{5\pi}{4}\right)$

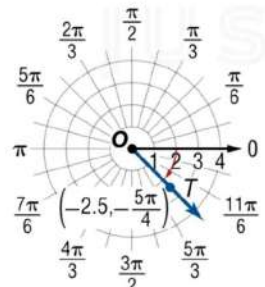
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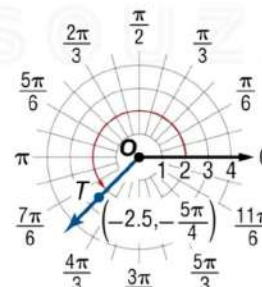
C.



B.



D.





## Topic: Polar Coordinates 2

### Practice

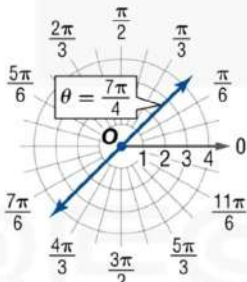
Question 1: Find three additional pairs of polar coordinates that name the given point if  $-360 \leq \theta \leq 360$  or  $-2\pi \leq \theta \leq 2\pi$ .

$$(5, 240^\circ)$$

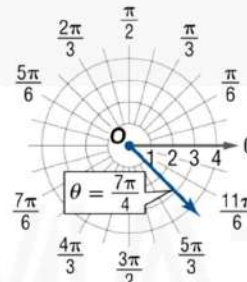
- A.  $(5, 120^\circ)$
- B.  $(5, 60^\circ)$
- C.  $(-5, -300^\circ)$
- D.  $(-5, -240^\circ)$

Question 2: Select the correct graph for  $\theta = \frac{7\pi}{4}$

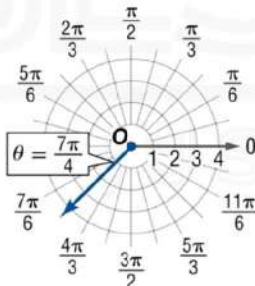
A.



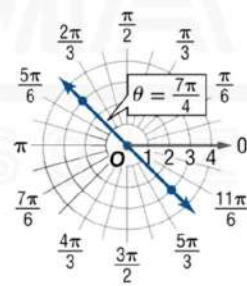
C.



B.



D.





Practice

Makes

Perfect



Question 3: Two sailboats can be described by the coordinates  $(9, 60^\circ)$  and  $(5, 320^\circ)$ , where the directed distance is measured in miles. How far apart are the boats?

- A. 9.27 miles
- B. 10.58 miles
- C. 11.03 miles
- D. 12.39 miles



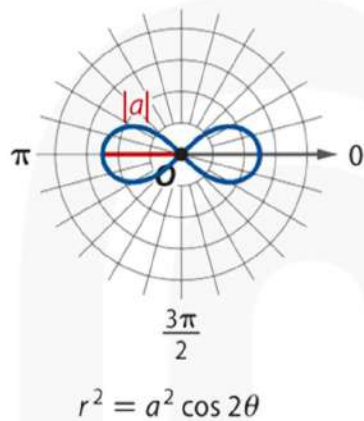
BEST MATH  
JUSTIN DSOUZA



## Topic: Graphs of Polar Equations 1

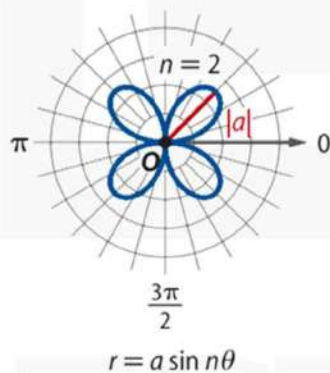
### Practice

Question 1: What type of graph is this?



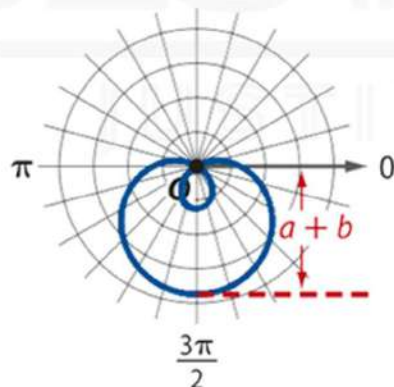
- A. Circle
- B. Limaçon
- C. Lemniscate
- D. Rose

Question 2: What type of graph is this?



- A. Circle
- B. Limaçon
- C. Lemniscate
- D. Rose

Question 3: What type of graph is this?



- A. Circle
- B. Limaçon
- C. Lemniscate
- D. Rose



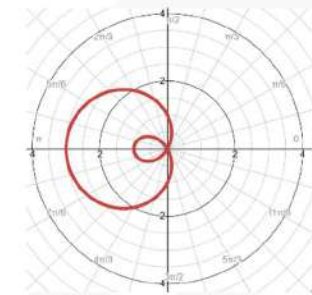


## Topic: Graphs of Polar Equations 2

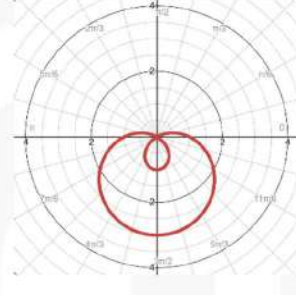
### Practice

Question 1: Graph  $r = 1 + 2 \cos \theta$

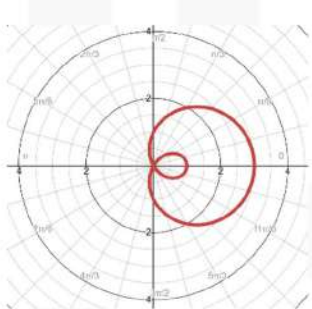
A.



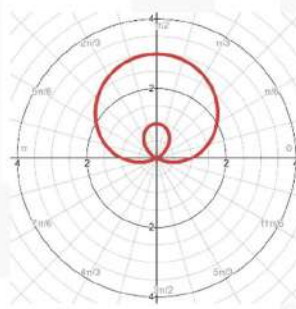
C.



B.

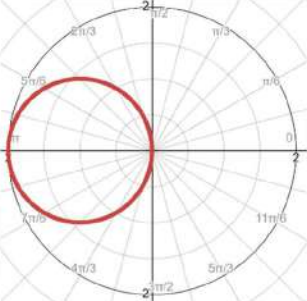


D.

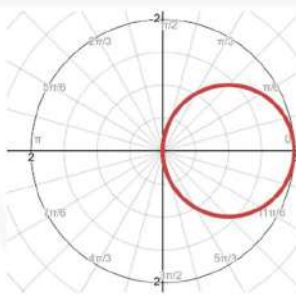


Question 2: Graph  $r = -2 \sin \theta$

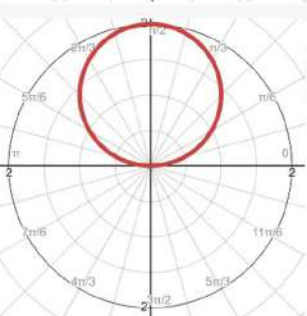
A.



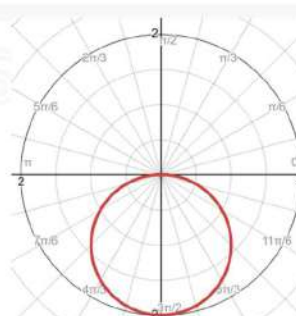
C.



B.



D.

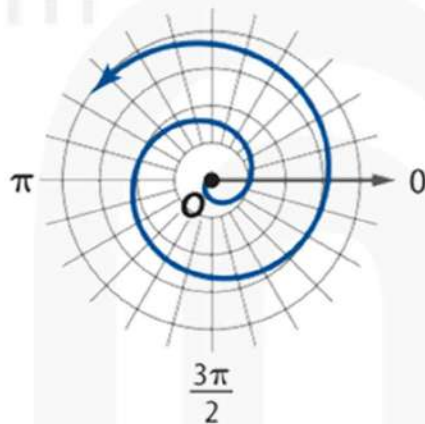




## Topic: Graphs of Polar Equations 3

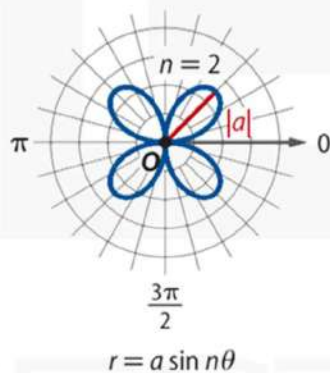
### Practice

Question 1: What type of graph is this?



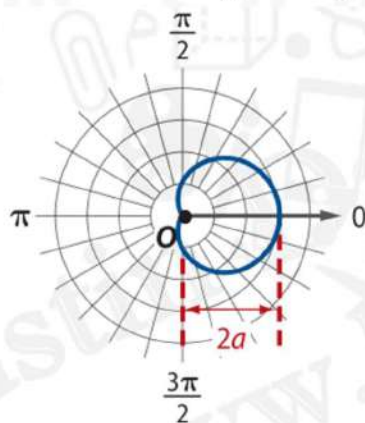
- A. Rose
- B. Cardioid
- C. Limaçon
- D. Spirals of Archimedes

Question 2: What type of graph is this?



- A. Rose
- B. Cardioid
- C. Limaçon
- D. Spirals of Archimedes

Question 3: What type of graph is this?



- A. Rose
- B. Cardioid
- C. Limaçon
- D. Spirals of Archimes



## Topic: Polar and Rectangular forms of Equations 1

### Practice

Question 1: Convert the point  $\left(4, -\frac{\pi}{3}\right)$  into rectangular coordinates.

- A.  $(-2\sqrt{3}, 2)$
- B.  $(2, 2\sqrt{3})$
- C.  $(-2, -3\sqrt{2})$
- D.  $(2, -2\sqrt{3})$

Question 2: Find two pairs of polar coordinates for each point with the given rectangular coordinates  $(2, -2)$

- A.  $(2\sqrt{2}, 315^\circ)$
- B.  $(-2, 45^\circ)$
- C.  $(-2\sqrt{2}, 180^\circ)$
- D.  $(2, -315^\circ)$

Question 3: Convert  $(2, \pi)$  into rectangular coordinates.

- A.  $(-2, 2)$
- B.  $(0, 2)$
- C.  $(-2, 0)$
- D.  $(0, 0)$



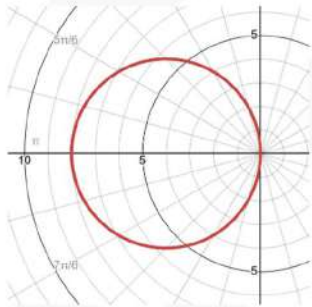


## Topic: Polar and Rectangular forms of Equations 2

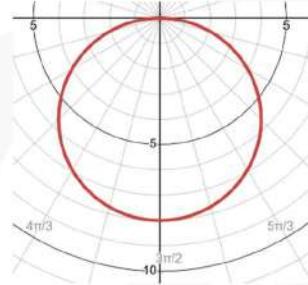
### Practice

Question 1: Graph  $x^2 + (y + 4)^2 = 16$

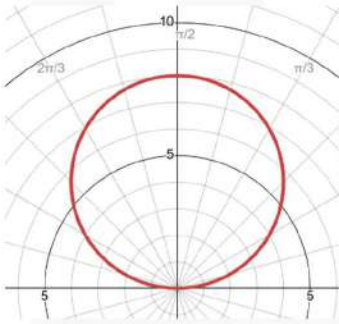
A.



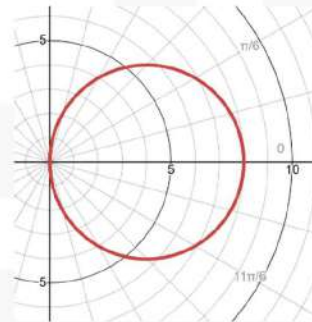
C.



B.

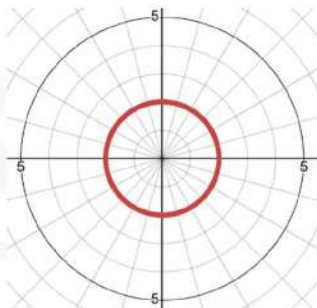


D.

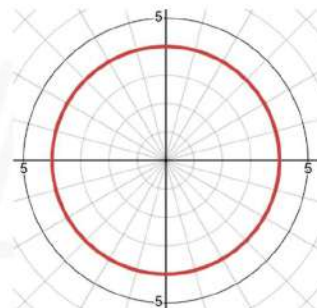


Question 2: Graph  $r = 5$

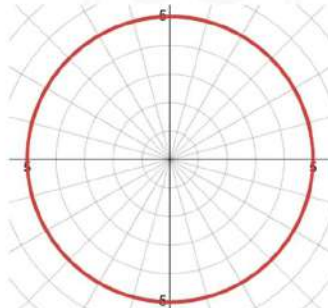
A.



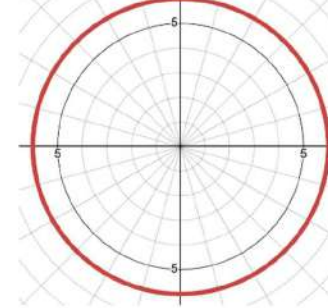
C.



B.



D.





## Topic: Complex Numbers and DeMoivre's Theorem 1

### Practice

Question 1: Find the absolute value of  $z = -3 - 2i$ .

- A.  $\sqrt{3}$
- B.  $\sqrt{10}$
- C.  $\sqrt{13}$
- D.  $\sqrt{15}$

Question 2: Find the absolute value of  $z = 5 - 5i$ .

- A.  $2\sqrt{5}$
- B. 5
- C.  $\sqrt{25}$
- D.  $5\sqrt{2}$

Question 3: Express complex number in polar form  $-8 + 6i$ .

- A.  $z = 10(\cos 2.21 + i \sin 2.21)$
- B.  $z = 15(\cos 2.5 + i \sin 2.5)$
- C.  $z = 11.4(\cos 0.67 + i \sin 0.67)$
- D.  $z = 10(\cos 2.5 + i \sin 2.5)$



## Topic: Complex Numbers and DeMoivre's Theorem 2

### Practice

Question 1: Express in rectangular form

$$z = 2 \left( \cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right).$$

- A.  $\sqrt{2} + \sqrt{2} i$
- B.  $\frac{3\sqrt{3}}{2} + \frac{3}{2} i$
- C.  $\sqrt{3} + \sqrt{3} i$
- D.  $\frac{3\sqrt{3}}{3} + i$

Question 2: Find the product in polar form

$$2 \left( \cos \frac{5\pi}{3} + i \sin \frac{5\pi}{3} \right) \cdot 4 \left( \cos \frac{\pi}{6} + i \sin \frac{\pi}{6} \right)$$

- A.  $2 \left( \cos \frac{\pi}{6} + i \sin \frac{\pi}{6} \right)$
- B.  $8 \left( \cos \frac{5\pi}{6} + i \sin \frac{5\pi}{6} \right)$
- C.  $8 \left( \cos \frac{11\pi}{6} + i \sin \frac{11\pi}{6} \right)$
- D.  $5 \left( \cos \frac{7\pi}{6} + i \sin \frac{7\pi}{6} \right)$



## Topic: Complex Numbers and DeMoivre's Theorem 3

### Practice

Question 1: If a circuit has a voltage  $E$  of 125 volts and an impedance  $Z$  of  $4 - 2j$  ohms, find the current  $I$  amps in the circuit in rectangular form.

Use  $E = I \cdot Z$

- A.  $20.1 + 9.8i$
- B.  $\sqrt{5} + \sqrt{3}i$
- C.  $25.2 + 12.3i$
- D.  $20.1 + 12.3i$

Question 2: If a circuit has a voltage  $E$  of 150 volts and an impedance  $Z$  of  $6 - 3j$  ohms, find the current  $I$  amps in the circuit in rectangular form.

Use  $E = I \cdot Z$

- A.  $20.1 + 9.8i$
- B.  $\sqrt{5} + \sqrt{3}i$
- C.  $25.2 + 12.3i$
- D.  $20.1 + 12.3i$