

تم تحميل هذا الملف من موقع المناهج الإماراتية



ملزمة القسم الورقي الكتابي وفق الهيكل الوزاري منهج ريفيل

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

تاريخ إضافة الملف على موقع المناهج: 10:17:31 2024-11-04

ملفات اكتب للمعلم اكتب للطالب الاختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل
منهج انجليزي | ملخصات و تقارير | مذكرات و بنوك | الامتحان النهائي للمدرس

المزيد من مادة
رياضيات:

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 الأول

ملزمة القسم الالكتروني وفق الهيكل الوزاري منهج ريفيل

1

حل ملزمة أسئلة مراجعة وفق الهيكل الوزاري منهج ريفيل

2

ملزمة أسئلة مراجعة وفق الهيكل الوزاري منهج ريفيل

3

أوراق عمل شاملة وفق الهيكل الوزاري منهج ريفيل

4

تجميعة أسئلة وفق الهيكل الوزاري منهج ريفيل

5

Example 3

- 13. COMPOUND INTEREST** Ryan invested \$5000 in an account that grows continuously at an annual rate of 2.5%.
- Write the function that represents the situation, where A is the value of Ryan's investment after t years.
 - What will Ryan's investment will be worth after 7 years?
- 14. SAVINGS** Jariah invested \$6500 in a savings account that grows continuously at an annual rate of 3.25%.
- Write the function that represents the situation, where A is the value of Jariah's investment after t years.
 - What will Jariah's investment will be worth after 18 years?
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- 15. INVESTMENTS** Marcella invested \$12,750 in a company. Her investment has been growing continuously at an annual rate of 5.5%.
- Write the function that represents the situation, where A is the value of Marcella's investment after t years.
 - What will Marcella's investment will be worth after 9 years?
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موقع المناهج الإلكترونية

1. **POPULATION** In 2000, the world population was estimated to be 6.124 billion people. In 2005, it was 6.515 billion.
 - a. Write an exponential growth equation to represent the population y in billions t years after 2000.
 - b. Use the equation to predict the year in which the world population reached 7.5 billion people.

 2. **CONSUMER AWARENESS** Jason wants to buy a new HD television but he thinks that if he waits, the quality of HD televisions will improve. The television he wants to buy costs \$2500 now, and based on pricing trends, Jason thinks that the price will increase by 4% each year.
 - a. Write an exponential growth equation to represent the price y of a new HD television t years from now.
 - b. Use the equation to predict when a new HD television will cost \$3000.
 - c. Jason decides to wait to buy a new television and saves his money. He puts \$2200 in a savings account with 4.7% annual interest compounded continuously. Determine when the amount in his savings will exceed the cost of a new television.
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Example 2

- 3. REASONING** A radioactive substance has a half-life of 32 years.
- Determine the value of k and the equation of decay for this radioactive substance.
 - How much of a 5-gram sample of the radioactive substance should be left after 100 years?

Example 3

- 4. CARBON DATING** Carbon-14 has a decay constant k of 0.00012. Use this information to determine the age of the objects based on the amount of Carbon-14.
- a fossil that has lost 95% of its Carbon-14
 - an animal skeleton that has 95% of its Carbon-14 remaining
- 5. HALF-LIFE** Archeologists uncover an ancient wooden tool. They analyze the tool and find that it has 22% as much Carbon-14 compared to the likely amount that it contained when it was made. Given that the decay constant of Carbon-14 is 0.00012, about how old is the artifact?

Find the zeros and asymptotes of each function. Then graph each function.

11. $f(x) = \frac{(x-4)^2}{x+2}$

12. $f(x) = \frac{(x+3)^2}{x-5}$

13. $f(x) = \frac{6x^2 + 4x + 2}{x+2}$

14. $f(x) = \frac{2x^2 + 7x}{x-2}$

15. $f(x) = \frac{3x^2 + 8}{2x-1}$

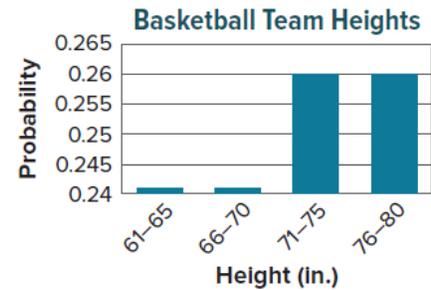
16. $f(x) = \frac{2x^2 + 5}{3x+4}$

Examples 2-4

4. **FUNDRAISING** At a fundraising dinner, the underside of 200 plates were randomly tagged with a sticker to indicate winning a cash prize. The frequency table shows the number of winning plates for each prize. Construct a relative frequency table, and graph the probability distribution.

Prize, (X)	Frequency
\$5	150
\$50	40
\$100	9
\$1000	1

5. **BASKETBALL** An athletic director made a probability distribution of the heights of her team's basketball players, and distributed a flyer that claimed that the majority of the players on the basketball team are 71 inches or taller. Identify any flaws in the representation of the probability distribution.



6. **TRACK** The preliminary times for a 110-meter hurdles race are shown. Create a histogram of the set of data. Determine whether the data can be approximated with a normal distribution.

Times (seconds)
14.75, 14.77, 14.31, 14.83, 14.84, 14.35, 14.69, 14.63, 14.74, 14.82, 14.25, 14.93

Example 5

Example 5

7. A normal distribution has a mean of 186.4 and a standard deviation of 48.9.
- What range of values represents the middle 99.7% of the data?
 - What percent of data will be greater than 235.3?
 - What range of values represents the upper 2.5% of the data?

Example 6

Find the z -value for each standard normal distribution.

- $\sigma = 9.8$, $X = 55.4$, and $\mu = 68.34$
- $\sigma = 11.6$, $X = 42.80$, and $\mu = 68.2$
- $\sigma = 11.9$, $X = 119.2$, and $\mu = 112.4$

Example 7

Use a table to find the area under the normal curve for each interval.

- $z > 0.58$
- $z < -1.56$
- $-2.29 < z < 2.76$

14.82, 14.25, 14.93

10. **OPEN RESPONSE** A normal distribution has a mean of 347.2 and a standard deviation of 13.9. (Lesson 8-4)

Part A What percent of the data is less than 319.4?

Part B What percent of the data is greater than 361.1?

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35. **CONSTRUCT ARGUMENTS** Determine whether each statement is *always*, *sometimes*, or *never* true. Justify your argument.

a. If k is a real number, then there is a value of θ such that $\cos \theta = k$.

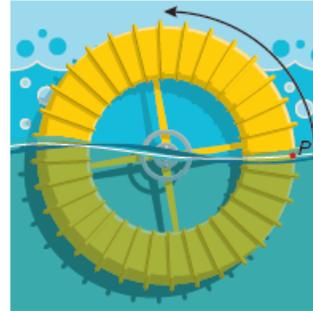
b. $\sin \theta = \sin (\theta + 2\pi)$

c. If $\theta = n\pi$, where n is a whole number, then $\cos \theta = 1$.

d. If θ is an angle in standard position in which the terminal side lies in Quadrant IV, then $\sin \theta$ is positive.

36. **REASONING** Point P lies on the unit circle and on the line $y = x$. If θ is an angle in standard position in which the terminal side contains P , what can you conclude about $\sin \theta$ and $\cos \theta$? Explain.
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- 37. USE A MODEL** The wheel at a water park has a radius of 1 meter. As the water flows, the wheel turns counterclockwise, as shown. A point P on the edge of the wheel begins at the surface of the water. The function $f(x) = \sin x$ represents the height of P above or below the surface of the water as the wheel rotates through an angle of x radians.



- How far does point P travel as the wheel rotates through an angle of $\frac{3\pi}{4}$ radians? Explain.
 - Graph $f(x) = \sin x$ on the coordinate plane.
 - What is the period of the function? Explain how you know, and explain how the period is shown in the graph. What does the period tell you about point P ?
 - What are the x -intercepts? What do these represent?
 - Identify an interval where the function is decreasing. What does this represent?
- 38. TIRES** A point on the edge of a car tire is marked with paint. As the car moves slowly, the marked point on the tire varies in distance from the surface of the road. The height in inches of the point is given by the function $h = -8 \cos t + 8$, where t is the time in seconds.
- What is the maximum height above ground that the point on the tire reaches?
 - What is the minimum height above ground that the point on the tire reaches?
 - How many rotations does the tire make per second?
 - How far does the marked point travel in 30 seconds? How far does the marked point travel in one hour?

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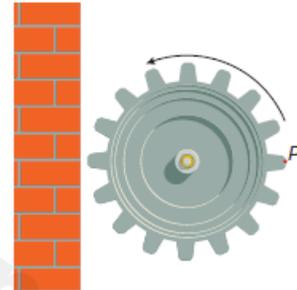
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39. **TEMPERATURES** The temperature T in degrees Fahrenheit of a city t months into the year is approximated by the formula $T = 42 + 30 \sin \frac{\pi}{6}t$.

- What is the highest monthly temperature for the city?
- In what month does the highest temperature occur?
- What is the lowest monthly temperature for the city?
- In what month does the lowest temperature occur?

40. **FACTORIES** A machine in a factory has a gear with a radius of 1 foot. A point P on the edge of the gear begins at the furthest point from a wall, and then the gear begins to rotate counterclockwise. The function $f(x) = \cos x + 2$ represents the distance of P from the wall as the gear rotates through an angle of x radians.



- What is $f(\frac{\pi}{2})$? What does it represent?
- Graph $f(x)$ on a coordinate plane.
- What is the period of the function? What does this tell you about P ?
- What are the maximum and minimum values of the function?

