35:00

Section 2, Module 2: Math — Annotate

1 — Mark for Review

What is the value of x that satisfies the two systems of equations given below? $(x \geq 0)$

$x^2 - y = 18$
$x = 2y + 8$

(A) -4
(B) -2
(C) 2
(D) 4

TESTQUBE Question 1 of 22 >

Section 2, Module 2: Math — Annotate

2 — Mark for Review

Elizabeth is participating in a quiz show. For every question she gets correct, she earns 2 points. For every question she gets incorrect, she loses 1 point. If there are a total of 20 questions and she earned 19 points in total, how many questions did she answer incorrectly?

(A) 6
(B) 7
(C) 8
(D) 9

TESTQUBE Question 2 of 22 >

Section 2, Module 2: Math — Annotate

3 — Mark for Review

If $6x - 3 = 15$, what is the value of $15x - 35$?

TESTQUBE Question 3 of 22 >

Section 2, Module 2: Math — Annotate

4 — Mark for Review

Rectangle A has a width $3cm$ shorter than the length. If the perimeter of rectangle A is 26, what is the width of rectangle A?

(A) $5cm$
(B) $6cm$
(C) $7cm$
(D) $8cm$

TESTQUBE Question 4 of 22 > Back Next

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Section 2, Module 2: Math

Annotate

5 Mark for Review

A travel agency is selling two types of tickets, Ticket A and Ticket B, for the observatory deck. Ticket A costs $\$15$ each, and Ticket B costs $\$25$ each. In one day, the travel agency sold a total of 57 tickets and earned a total revenue of $\$1,065$. How many Ticket B's were sold that day?

(A) 7 (A)

(B) 14 (B)

(C) 21 (C)

(D) 28 (D)

TESTQUBE Question 5 of 22 >

Section 2, Module 2: Math

Annotate

7 Mark for Review

Which of the following is not a factor of $2x^3 + 7x^2 - 19x - 60$?

(A) -4 (A)

(B) 3 (B)

(C) $-5/2$ (C)

(D) $2/3$ (D)

TESTQUBE Question 7 of 22 >

Section 2, Module 2: Math

Annotate

6 Mark for Review

In the given equation below, b is a constant. The equation has one real solution. What is the value of b when $b > 0$?

$3x^2 - bx + 3 = 0$

TESTQUBE Question 6 of 22 >

Section 2, Module 2: Math

Annotate

8 Mark for Review

Which of the following expressions is equivalent to $a^6 \div a^4$?

(A) a^{6+4} (A)

(B) a^{6-4} (B)

(C) $a^{6\times4}$ (C)

(D) $a^{6/4}$ (D)

TESTQUBE Question 8 of 22 > Back Next

Section 2, Module 2: Math

Annotate

9 Mark for Review

In the xy-plane, what is the area of a polygon that satisfies the condition of the three inequalities shown below?

$y \leq \frac{4}{3}x + 4$

$y \leq -x + 4$

$y \geq 0$

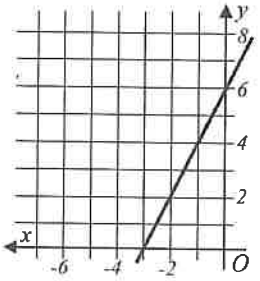
TESTBQUBE Question 9 of 22 >

Section 2, Module 2: Math

Annotate

10 Mark for Review

What is the x-intercept of the graph below?



(A) $(-3, 0)$ (A)

(B) $(3, 0)$ (B)

(C) $(0, 6)$ (C)

(D) $(6, 0)$ (D)

TESTBQUBE Question 10 of 22 > Back Next

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Section 2, Module 2: Math

Annotate

11

Mark for Review

The function f is defined by $f(x) = 2x - 5$. In the xy-plane, the graph $f(x)$ is shifted 1 unit to the left and 4 units up. What is the x-intercept of the new function?

(A) -1

(B) -0.5

(C) 0.5

(D) 1

TESTBQUBE Question 11 of 22 >

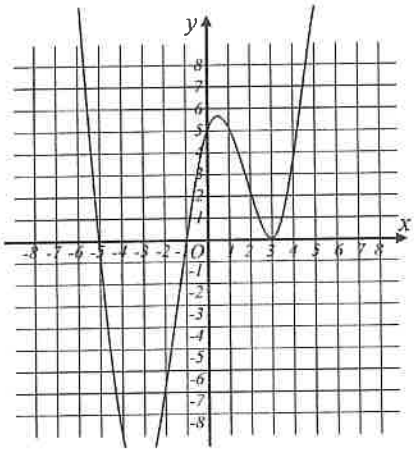
Section 2, Module 2: Math

Annotate

12

Mark for Review

The graph of $y = g(x)$ is shown below. For how many values of x does $g(x) = 0$?



(A) 0

(B) 1

(C) 2

(D) 3

TESTBQUBE Question 12 of 22 > Back Next

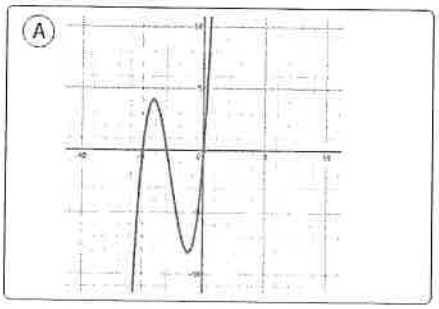
Section 2, Module 2: Math

Annotate

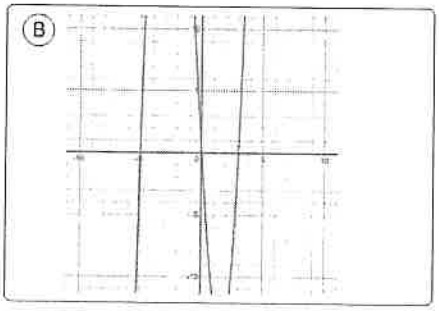
13 Mark for Review

Which of the following graphs correctly represents the function $f(x) = x(x-3)(x+5)$?

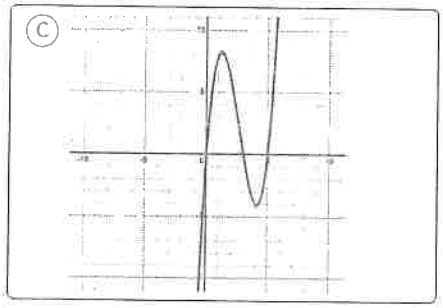
A



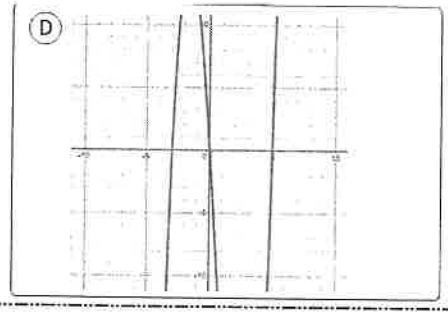
B



C



D



TESTQUBE Question 13 of 22 >

Section 2, Module 2: Math

Annotate

14 Mark for Review

The equation below defines the function g. What is the maximum value of $g(x)$?

$g(x) = \frac{-5}{3}x^2 - 10x + 9$

TESTQUBE Question 14 of 22 >

Section 2, Module 2: Math

Annotate

15 Mark for Review

For a particular factory that manufactures pens, 6 out of every 100 pens are defective. If this machine produces 500 pens a day, how many defects in total are expected to be found in a week? (The machine produces all seven days a week from Monday to Sunday.)

TESTQUBE Question 15 of 22 > Back Next

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Section 2, Module 2: Math

Annotate

16

Mark for Review

Alex is depositing his money at a bank. Alex estimates that, starting from present, the value of money will increase by 0.5 percent every 10 years. If the present amount of money deposited is $\$7,500$, which of the following represents the estimate of the amount of money, in dollars, x years from now?

(A) $7,500(1.05)^{x/10}$

(B) $7,500(1.005)^{x/10}$

(C) $7,500(1.05)^{10/x}$

(D) $7.500(1.005)^{10/x}$

TESTSQUBE Question 16 of 22 >

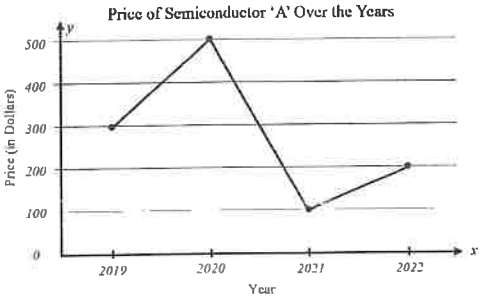
Section 2, Module 2: Math

Annotate

17

Mark for Review

The line graph below shows the price of semiconductor A over the years from 2019 to 2022. Which time interval, spanning from 2019 to 2022, exhibits the largest difference in the price of semiconductor A?



(A) 2019 to 2020

(B) 2020 to 2021

(C) 2021 to 2022

(D) None of the above

TESTSQUBE Question 17 of 22 > Back Next

Section 2, Module 2: Math — Annotate

18 Mark for Review

There is a 12-sided die which is labeled with a number from 1 to 12, with a different number on each side. If the die is rolled once, what is the probability the number is either an odd or even number?

(A) 0 (A)

(B) 1/12 (B)

(C) 1/2 (C)

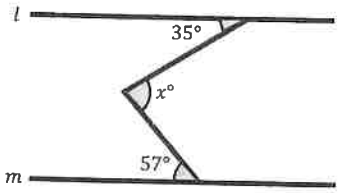
(D) 1 (D)

TESTQUBE Question 18 of 22 >

Section 2, Module 2: Math — Annotate

19 Mark for Review

In the diagram below, the lines l and m run parallel to each other. What is the measure of angle x in degrees?



TESTQUBE Question 19 of 22 >

Section 2, Module 2: Math — Annotate

20 Mark for Review

A circle has an equation of $x^2 + 6x + y^2 - 10y + 18 = 0$. What is the radius of this circle?

(A) 2 (A)

(B) 4 (B)

(C) 8 (C)

(D) 16 (D)

TESTQUBE Question 20 of 22 >

Section 2, Module 2: Math — Annotate

21 Mark for Review

What is the circumference of a circle with an area of 16π?

(A) 2π (A)

(B) 4π (B)

(C) 8π (C)

(D) 16π (D)

TESTQUBE Question 21 of 22 > Back Next

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Section 2, Module 2: Math

Annotate

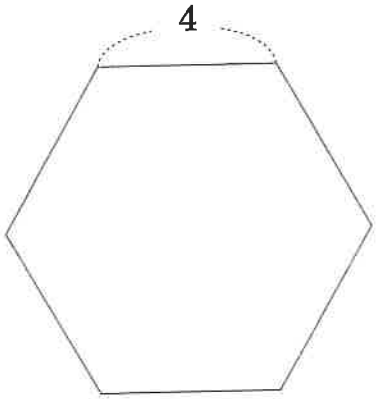
II

22

Mark for Review

Find the area of a regular hexagon with each side length of 4. Round your answer to the nearest tenth.

III



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