35:00

Section 2, Module 2: Math — Annotate

1 Mark for Review

What value of x is the solution for the following equation below?

$6x - 3x - 15 = 75$

TEST QUBE Question 1 of 22 >

Section 2, Module 2: Math — Annotate

2 Mark for Review

The solution to the given system of equations is (m, n). What is the value of $m - n$?

$3m + 4n = 7$
$4m + 3n = 10$

(A) -3 (A)
(B) -1 (B)
(C) 1 (C)
(D) 3 (D)

TEST QUBE Question 2 of 22 >

Section 2, Module 2: Math — Annotate

3 Mark for Review

Alex takes a tram and bicycle from home to his workplace. The tram travels at a constant speed of 15 miles per hour and the bicycle at 10 miles per hour. The distance between his home and workplace is 10 miles and it takes 45 minutes for him to travel one-way. How long did Alex travel on the tram?

(A) 12 minutes (A)
(B) 15 minutes (B)
(C) 24 minutes (C)
(D) 30 minutes (D)

TEST QUBE Question 3 of 22 >

Section 2, Module 2: Math — Annotate

4 Mark for Review

Which of the systems of equations have infinitely many solutions?

(A) $2x + 4y = 3$ and $6x + 12y = 9$ (A)
(B) $-x - y = 5$ and $x - y = 5$ (B)
(C) $4x - y = -2$ and $4x - y = 2$ (C)
(D) $3x + 3y = 1$ and $3x - 3y = -1$ (D)

TEST QUBE Question 4 of 22 > Back Next

I II III IV V VI VII

I

Section 2, Module 2: Math — Annotate

5 — Mark for Review

II

The function g is defined by $g(x) = 3x^2 - 6x + 4$. For what value of x does $g(x) = 28$?

(A) -4 (A)

(B) -2 (B)

(C) 3 (C)

III

(D) 5 (D)

IV

TESTBQUBE Question 5 of 22 >

Section 2, Module 2: Math — Annotate

7 — Mark for Review

The given equation relates the numbers a, b, and c. Which of the following correctly expresses b in terms of a and c?

$c = 3a^2 - 2b$

(A) $b = \frac{3a^2+c}{2}$ (A)

(B) $b = \frac{3}{2a^2-c}$ (B)

(C) $b = \frac{3a^2-c}{2}$ (C)

(D) $b = 3a^2 - c$ (D)

TESTBQUBE Question 7 of 22 >

V

Section 2, Module 2: Math — Annotate

6 — Mark for Review

What value of b would result in no real solution for the given equation below?

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

VI

(A) 4 (A)

(B) 5 (B)

(C) 6 (C)

(D) 7 (D)

VII

TESTBQUBE Question 6 of 22 >

Section 2, Module 2: Math — Annotate

8 — Mark for Review

Jake is shopping at a store and plans to purchase both cookies and chips. The price of each cookie is $\$2.5$, while each chip costs $\$1.5$. Jake intends to buy 6 chips and wishes to spend a minimum of $\$26$ but no more than $\$27$ in total. How many cookies should Jake include in the purchase?

TESTBQUBE Question 8 of 22 > Back Next

Section 2, Module 2: Math

Annotate

9

Mark for Review

Which of the following expressions is equivalent to $\frac{(a^4b^3c^2)(a^{-1}b^2c^5)}{(ab^2c^{-1})}$, where a, b, and c are positive?

(A) $a^{-4}b^{12}c^{-10}$ A

(B) $a^{-4}b^3c^{-10}$ B

(C) $a^4b^7c^6$ C

(D) $a^2b^3c^8$ D

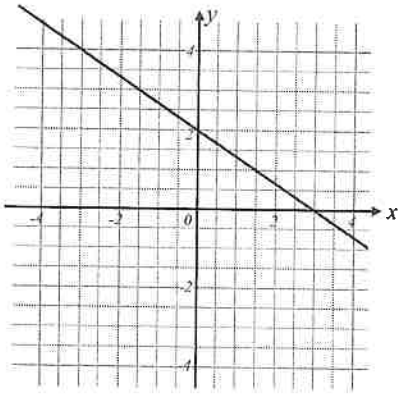
Section 2, Module 2: Math

Annotate

10

Mark for Review

What is the slope for the given linear function below?



(A) $-3/2$ A

(B) $-2/3$ B

(C) $2/3$ C

(D) $3/2$ D

I

II

III

IV

V

VI

VII

Section 2, Module 2: Math

Annotate

11

Mark for Review

The function f is defined by $f(x) = -2x + 6$ and function g is defined by $g(x) = -f(x)$. What is the value of $g(-1)$?

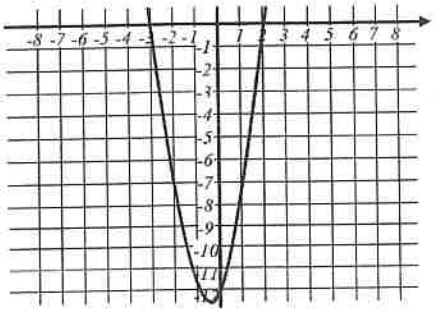
Section 2, Module 2: Math

Annotate

12

Mark for Review

Which of the following equations defines the function f as shown in the graph below?



(A) $f(x) = -2x^2 + 2x + 12$ (A)

(B) $f(x) = -2x^2 - 2x + 12$ (B)

(C) $f(x) = 2x^2 - 2x - 12$ (C)

(D) $f(x) = 2x^2 + 2x - 12$ (D)

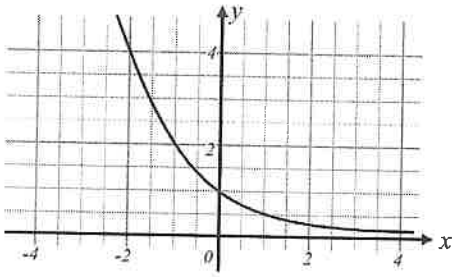
Section 2, Module 2: Math

Annotate

13

Mark for Review

The function $f(x)$ is illustrated below. What is the value of $f(-2)$?



(A) -4 (A)

(B) -2 (B)

(C) 2 (C)

(D) 4 (D)

TEST QUBE Question 13 of 22 >

Section 2, Module 2: Math

Annotate

14

Mark for Review

To produce 10 grams of dough, a mixture is prepared by combining 8 grams of flour, 1.5 grams of water, and 0.5 grams of sugar. If there is a total of 65 grams of dough, how many grams of water is included in the mixture? (Ignore the gram sign.)

TEST QUBE Question 14 of 22 >

Section 2, Module 2: Math

Annotate

15

Mark for Review

Jeremy ordered a steak and wine at a restaurant. The steak costs 28 dollars and wine 12 dollars. Jeremy must pay 10 percent tax to the total amount of food he paid and an additional tip of 6 dollars above that. How much money does Jeremy have to pay at the restaurant? (ignore the dollar sign)

TEST QUBE Question 15 of 22 > Back Next

I II III IV V VI VII

I

Section 2, Module 2: Math

Annotate

16 Mark for Review

Class A comprises 50 students, where 22 students can speak Spanish, 16 students can speak French, and 4 students can speak both languages. What is the probability that a randomly selected student from Class A speak neither Spanish nor French?

II

(A) 16%

(B) 24%

III

(C) 32%

(D) 36%

IV

TESTBQUBE Question 16 of 22 >

Section 2, Module 2: Math

Annotate

17 Mark for Review

Anna weighs 125 pounds. Determine Anna's weight in tons. (1 pound = 0.45 kilograms and 1 kilogram = 0.001 ton)

V

(A) 0.0056 tons

(B) 0.056 tons

VI

(C) 0.56 tons

(D) 5.6 tons

VII

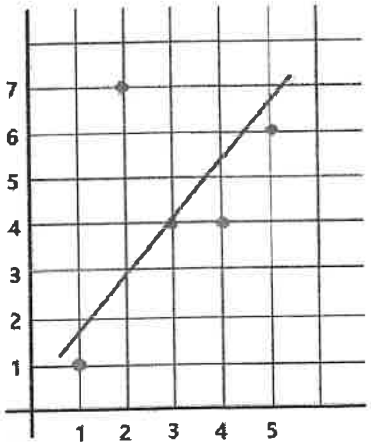
TESTBQUBE Question 17 of 22 >

Section 2, Module 2: Math

Annotate

18 Mark for Review

Which of the following equations best represents the line of best fit for the scatterplot below?



(A) $y = 1.2x + 0.5$

(B) $y = -1.2x + 0.5$

(C) $y = 1.2x - 0.5$

(D) $y = -1.2x - 0.5$

TESTBQUBE Question 18 of 22 > Back Next

Section 2, Module 2: Math

Annotate

19 Mark for Review

What is the volume of a pyramid with a length of 6, a width of 4 and a height of 5?

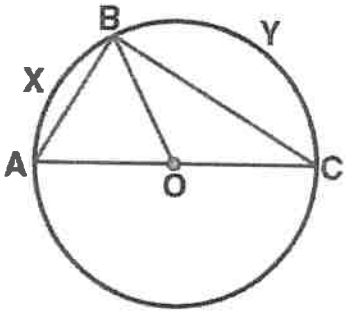
TESTQUBE Question 19 of 22 >

Section 2, Module 2: Math

Annotate

20 Mark for Review

In the diagram below, triangle ABC is circumscribed by circle with a center O. If $\angle BAC$ is 40°, what is $\angle BCA$?



(A) 30° A

(B) 40° B

(C) 50° C

(D) 60° D

TESTQUBE Question 20 of 22 > Back Next

I

Section 2, Module 2: Math

Annotate

21

Mark for Review

II

A ladder, initially 15 feet long, is leaning exactly at the top of the building with the base of the ladder positioned 9 feet from the building. When the ladder is pulled 3 feet farther from the building, the top of the ladder drops to a new height. Let's denote the angle between the newly adjusted ladder and the ground as A. Find the value of $\sin(A)$.

III

IV

TESTQUBE Question 21 of 22 >

V

Section 2, Module 2: Math

Annotate

22

Mark for Review

Consider an equilateral triangle A with a side length of $4cm$. If triangle B is similar to triangle A and has side lengths that are 50 percent longer than that of triangle A, what is the area of triangle B?

VI

(A) $4\sqrt{3}$ A

(B) $6\sqrt{3}$ B

(C) $8\sqrt{3}$ C

(D) $9\sqrt{3}$ D

VII

TESTQUBE Question 22 of 22 >