Started on	Friday, 12 January 2024, 4:58 PM
State	Finished
Completed on	Friday, 12 January 2024, 4:59 PM
Time taken	25 secs
Grade	**0.00** out of 20.00 (**0**%)

Question 1

Not answered

Marked out of 1.00

What is the difference between the slope and the y-Intercept of line (d) of equation y = x - 1?

Select one:

- a. 2
- b. -2
- c. -1
- d. 0

Your answer is incorrect.

The correct answer is: 2

Question 2

Not answered

Marked out of 1.00

If a > b and a(b - a) = 0. which of the following must be true?

I. a = 0

II.b>0

III.b<0

Select one:

- a. I and II
- b. I only
- c. I and III
- d. II only

Your answer is incorrect.

The correct answer is: I and III

Question 3

Not answered

Marked out of 1.00

If x + y = 1. which of the following is always true ?

Select one:

a. x-y=xy

b. $x^2+y^2=1$

c. $x^2+y=x+y^2$

d. y-x=1-xy

Your answer is incorrect.

The correct answer is: $x^2+y=x+y^2$

Question 4

Not answered

Marked out of 1.00

When a system of two linear equations has a unique solution, how do the graphs of the equations appear ?

Select one:

a. The lines are parallel

b. The lines are confounded

c. The lines intersect at a single point

d. None of the above

Your answer is incorrect.

The correct answer is: The lines intersect at a single point

Question 5

Not answered

Marked out of 1.00

In a certain school, there are m classes with n students each class. If a total of p pens are distributed equally among the students, how many pens are there for each student?

Select one:

a. $\frac{pm}{n}$

b. mn

c. mnp

d. $\frac{p}{mn}$

Your answer is incorrect.

The correct answer is: $\frac{p}{mn}$

Question 6

Not answered

Marked out of 1.00

If -1 < a < 0, which of the numbers below is the greatest?

Select one:

a. $\frac{a}{2}$

b. $\frac{2}{a}$

c. 2a

d. $\frac{a}{4}$

Your answer is incorrect.

The correct answer is: $\frac{a}{4}$

Question 7

Not answered

Marked out of 1.00

If $y \neq 0$ and $\frac{3x-2y}{y} = -\frac{6}{5}$, which of the following could be the value of $\frac{x}{y}$?

Select one:

a. $-\frac{3}{20}$

b. \(\frac{4}{15} \)

c. -\(\frac{4}{15} \)

d. \(\frac{16}{15} \)

Your answer is incorrect.

The correct answer is: \(\frac{4}{15} \)

Question 8

Not answered

Marked out of 1.00

Which of the following quadratic equations admits no real solutions?

Select one:

a. -2(x - 1)(x + 3) = 0

b. $2(x - 1)^2 - 5 = 0$

c. $-2(x - 1)^2 + 5 = 0$

d. $-2(x - 1)^2 - 5 = 0$

Your answer is incorrect.

The correct answer is: $-2(x - 1)^2 - 5 = 0$

Question 9

Not answered

Marked out of 1.00

Which of the following represents the factorized form of the expression below?

x^4-16x^2+48

Select one:

a. $(x - 4)^2(x - 12)^2$

b. $(x^2 — 4)^2(x^2 — 12)^2$

c. (x-2) (x + 2) (x -2\(\sqrt{3} \))(x +2\(\sqrt{3} \))

d. $(x — 2)^2$ (x — 2\(\sqrt{3} \))^2

Your answer is incorrect.

The correct answer is: (x-2) (x + 2) (x -2\(\sqrt{3} \))(x +2\(\sqrt{3} \))

Question 10

Not answered

Marked out of 1.00

On a TV show, the competitors have to represent their products in x minutes. The minimum and maximum lengths are 4 and 6 minutes respectively.

Which equation represents the given situation?

Select one:

a. \(\left| \begin{matrix} x-5 \end{matrix} \right| \) \(\leq \) 1

b. \(\left| \begin{matrix} x-4 \end{matrix} \right| \) <6

c. \(\left| \begin{matrix} x-1 \end{matrix} \right| \)<5

d. \(\left| \begin{matrix} x-2 \end{matrix} \right| \) \(\leq \) 4

Your answer is incorrect.

The correct answer is: \(\left| \begin{matrix} x-5 \end{matrix} \right| \) \(\leq \) 1

Question 11

Not answered

Marked out of 1.00

For the function f defined below, what are all the vaiues of x for which the function is defined?

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

Select one:

- a.]-\(\infty \),-2[
- b.]-2 ,+\(\infty \)[
- c.]-2,2[
- d.]-\(\infty \),+\(\infty \)[

Your answer is incorrect.

The correct answer is:]-2 ,+\(\infty \)[

Question 12

Not answered

Marked out of 1.00

The graph of the function f in the xy-plane contains the point (1,4) and has a y-intercept of 3. The function g is defined by g(x) = 2 + 2f(x). Which of the following points lie on the graph of g?

Select one:

- a. (1,3)
- b. (1,8)
- c. (0,3)
- d. (0,8)

Your answer is incorrect.

The correct answer is: (0,8)

Question 13

Not answered

Marked out of 1.00

If n is a positive integer and $2^{n+1} - 2^n = k$. what is the 2^{n-2} in terms of k?

Select one:

a. \(\frac{k}{2} \)

b. \(\frac{k}{4} \)

c. 4k

d. 8k

Your answer is incorrect.

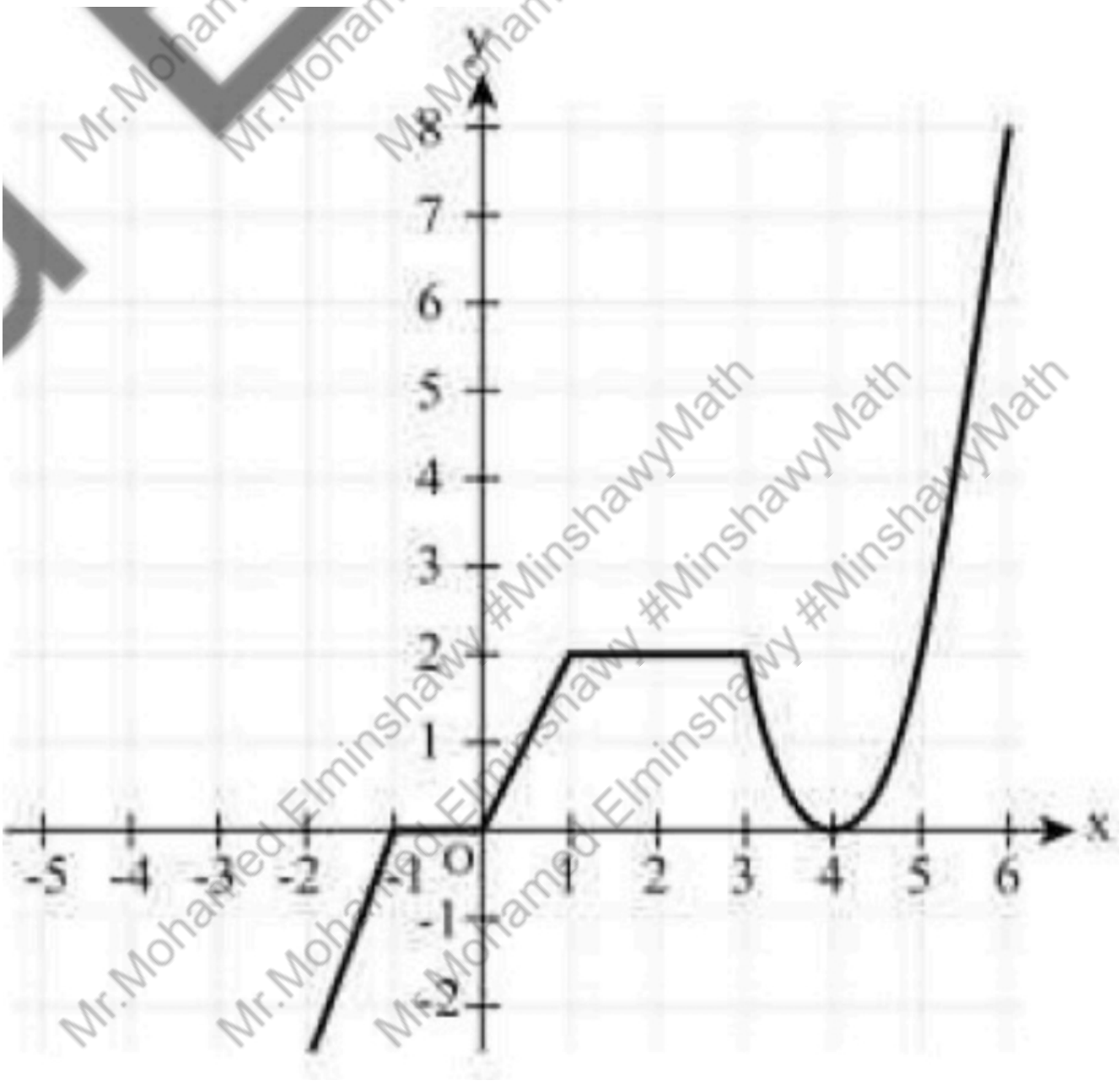
The correct answer is: \(\frac{k}{4} \)

Question 14

Not answered

Marked out of 1.00

Using the curve of function f that is represented below, which of the following is equivalent to f(f(2))-f(4) ?



Select one:

a. f(5)

b. f(0)

c. f(-2)

d. f(-1)

Your answer is incorrect.

The correct answer is: f(5)

Question 15

Not answered

Marked out of 1.00

Knowing that i=\(\sqrt{-1} \) , which of the following is equivalent to \(\frac{3-i}{1-2i} \) ?

Select one:

a. 3+i

b. 1-i

c. 1+i

d. -3

Your answer is incorrect.

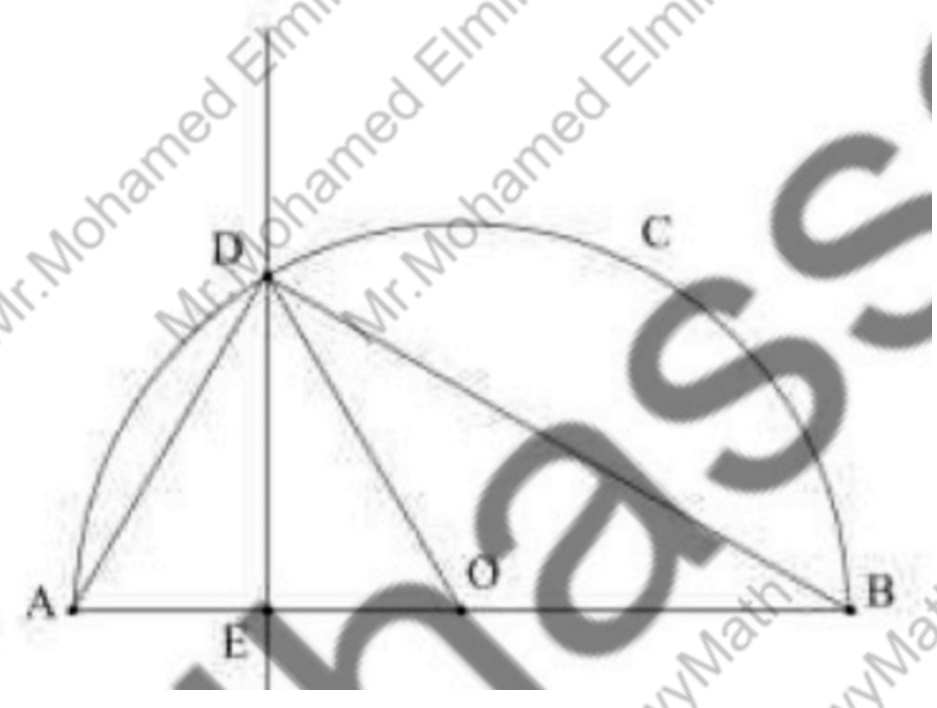
The correct answer is: 1+i

Question 16

Not answered

Marked out of 1.00

In the figure below, C is a semicircle of center O and diameter $\overline{AB}$. (DE) is the perpendicular bisector of $\overline{AO}$. What is the measure of $\angle OBD$?



Answer:

The correct answer is: 30

Question 17

Not answered

Marked out of 1.00

For what value of x is \(\frac{1}{7} \) - \(\frac{6}{x} \)= -3 ?

Answer:

The correct answer is: 21/11

Question 18

Not answered

Marked out of 1.00

A restaurant has 20 tables that can seat a total of 88 people. Some of the tables seat 4 people. and the others seat 5 people. How many tables seat 4 people?

Answer:

The correct answer is: 12

Question 19

Not answered

Marked out of 1.00

The graph (C) of the function $f(x) = -2x^2 + 8x - 6$ is a parabola. If point S (h,k) is the vertex of the parabola, what is the value of h + k?

Answer:

The correct answer is: 4

Question 20

Not answered

Marked out of 1.00

x_1 and x_2 are the real solutions of the equation $2x^2 - 5x - a + 3 = O$. If $x_1 - x_2 = 2.5$ then a=

Answer:

The correct answer is: 3

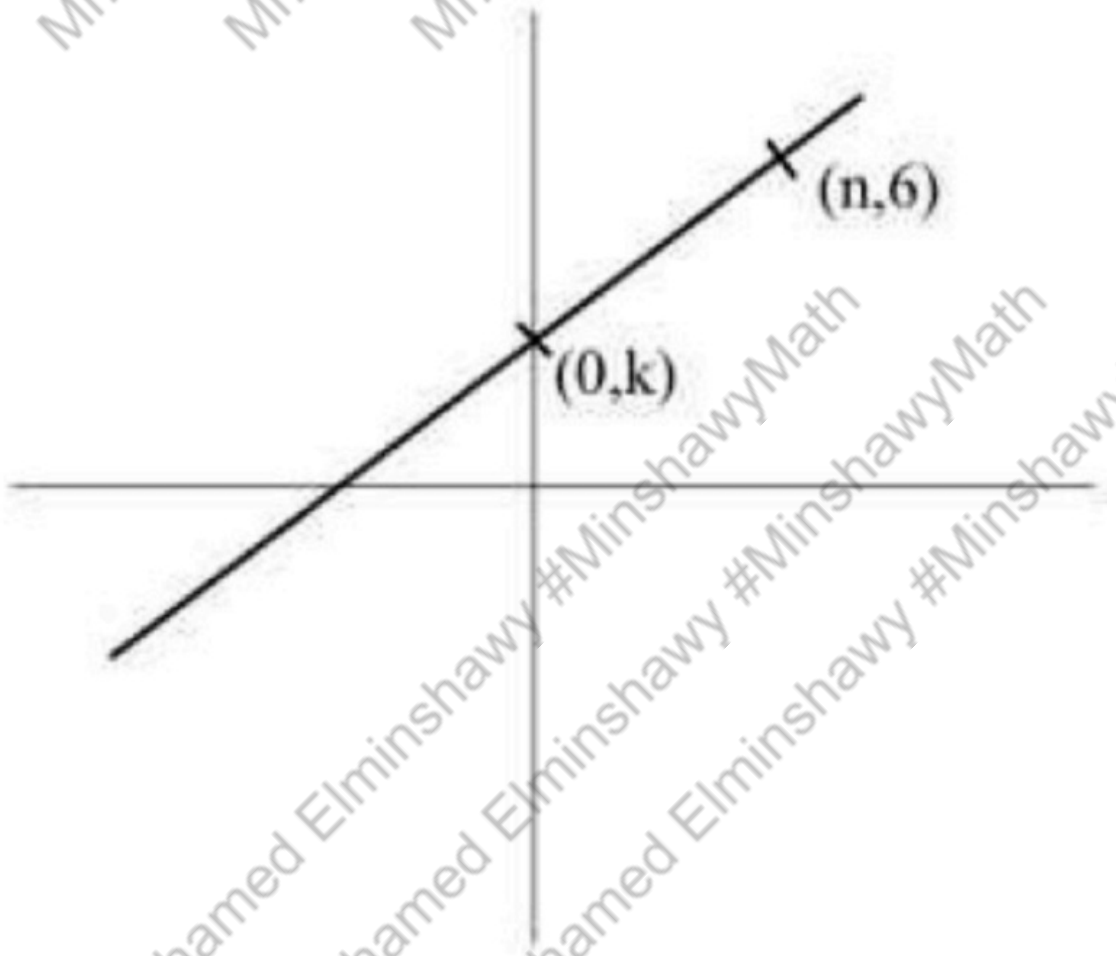
Started on	Friday, 12 January 2024, 4:59 PM
State	Finished
Completed on	Friday, 12 January 2024, 5:00 PM
Time taken	9 secs
Grade	**0.00** out of 38.00 (**0**%)

Question 1

Not answered

Marked out of 1.00

If the graph below has an equation of $y = 3x + 4$, what is the value of $n - k$?



Select one:

- a. $-\frac{10}{3}$
- b. $\frac{10}{3}$
- c. 2
- d. -1

Your answer is incorrect.

The correct answer is: $-\frac{10}{3}$

Question 2

Not answered

Marked out of 1.00

A store sells red apples and gree es. If, of me total of 368, there are triple as many red apples as green apples, how many red apples are there in the store?

Select one:

- a. 92
- b. 184
- c. 276
- d. None of the above

Your answer is incorrect.

The correct answer is: 276

Question 3

Not answered

Marked out of 1.00

If $a \times b=12$ and $\frac{a}{b}=3$, then $a+a^2b=$

Select one:

- a. 3(4a+b)
- b. 2(b-4a)
- c. 12(a+b)
- d. 12a+b

Your answer is incorrect.

The correct answer is: 3(4a+b)

Question 4

Not answered

Marked out of 1.00

To rent a bicycle, the shop owner offers the customers the four options below.

Option 1: $6 per hour at any time.

Option 2: a weekly payment of $25, in addition to an amount of $4 per hour.

Option 3: a weekly payment of $20, in addition to an ount of $3 per hour plus a 10% taxes on the total mount paid.

Option 4: a weekly payment of $50, in addition to an amount of $3 per hour plus a cashback of 10% on the total amount paid.

A customer wants to rent a bicycle for a total of sixteen hours in the first week of September. Which option is more advantageous for the customer?

Select one:

a. Option 4

b. Option 2

c. Option 3

d. Option 1

Your answer is incorrect.

The correct answer is: Option 3

Question 5

Not answered

Marked out of 1.00

The equation below models the total cost y, in dollars, that a company charges a customer to rent a jet ski for one day and drive it x minutes. The total cost consists of a flat fee plus a charge per minute. When the equation is graphed in the xy-plane, what does the y-intercept of the graph represent in terms of the model?

$y=4.99+0.5x$

Select one:

a. A charge per minute of $4.99

b. A charge per minute of $0.5

c. Total daily charges of $5,49

d. A flat fee of $4.99

Your answer is incorrect.

The correct answer is: A flat fee of $4.99

Question 6

Not answered

Marked out of 1.00

In the xy-plane, If (1,1) is a solution to the system of inequalities below, which of the following could be true about a and b?

$y < x + a$

$y > -x + b$

Select one:

a. a=1 and b=3

b. a=1 and b=1

c. a=2 and b=4

d. a=-1 and b=1

Your answer is incorrect.

The correct answer is: a=1 and b=1

Question 7

Not answered

Marked out of 1.00

When a number x is divided by 3. the quotient is m and the remainder is 1. When the same number x is divided by 4. the quotient is n and the remainder is 5. Which of the following must be true?

Select one:

a. 3m-4n=4

b. m+5n=7

c. m-n=$\frac{2}{7}$

d. 3m+4n=6

Your answer is incorrect.

The correct answer is: 3m-4n=4

Question 8

Not answered

Marked out of 1.00

This month, Albert can spend 500 dollars at most from his monthly allowance. He already spent 20 dollars on his Netflix account. He now wants to buy CDs for his PlayStation to play with his friends. If each CD costs 40 dollars, which of the following inequalities best models the situation described above?

Select one:

a. 40x-100≤300

b. 40x+100 ≥ 300

c. 40x+100\(\leq \)300

d. 40x-100\(\geq \)300

Your answer is incorrect.

The correct answer is: 40x-100\(\leq \)300

Question 9

Not answered

Marked out of 1.00

If the ratio of vaccinated teachers to non-vaccinated teachers in a school is 6:7, what is the percentage of the vaccinated school teachers?

Select one:

a. 7.69%

b. 85.71%

c. 46.15%

d. 53.84%

Your answer is incorrect.

The correct answer is: 46.15%

Question 10

Not answered

Marked out of 1.00

Paul can eat \(\frac{1}{t} \) cherry tomatoes in m minutes. At this rate, how many cherry tomatoes can he eat in \(\frac{1}{m^2} \) minutes?

Select one:

a. \(\frac{t}{m^2} \)

b. \(\frac{1}{tm} \)

c. t^2

d. \(\frac{1}{tm^3} \)

Your answer is incorrect.

The correct answer is: \(\frac{1}{tm^3} \)

Question 11

Not answered

Marked out of 1.00

Last year, the average cost of a restaurant meal was $12. Today, the average of the same meal costs $15. By what percent was the cost of the avers restaurant meal increased?

Select one:

- a. 20%
- b. 25%
- c. 45%
- d. 30%

Your answer is incorrect.

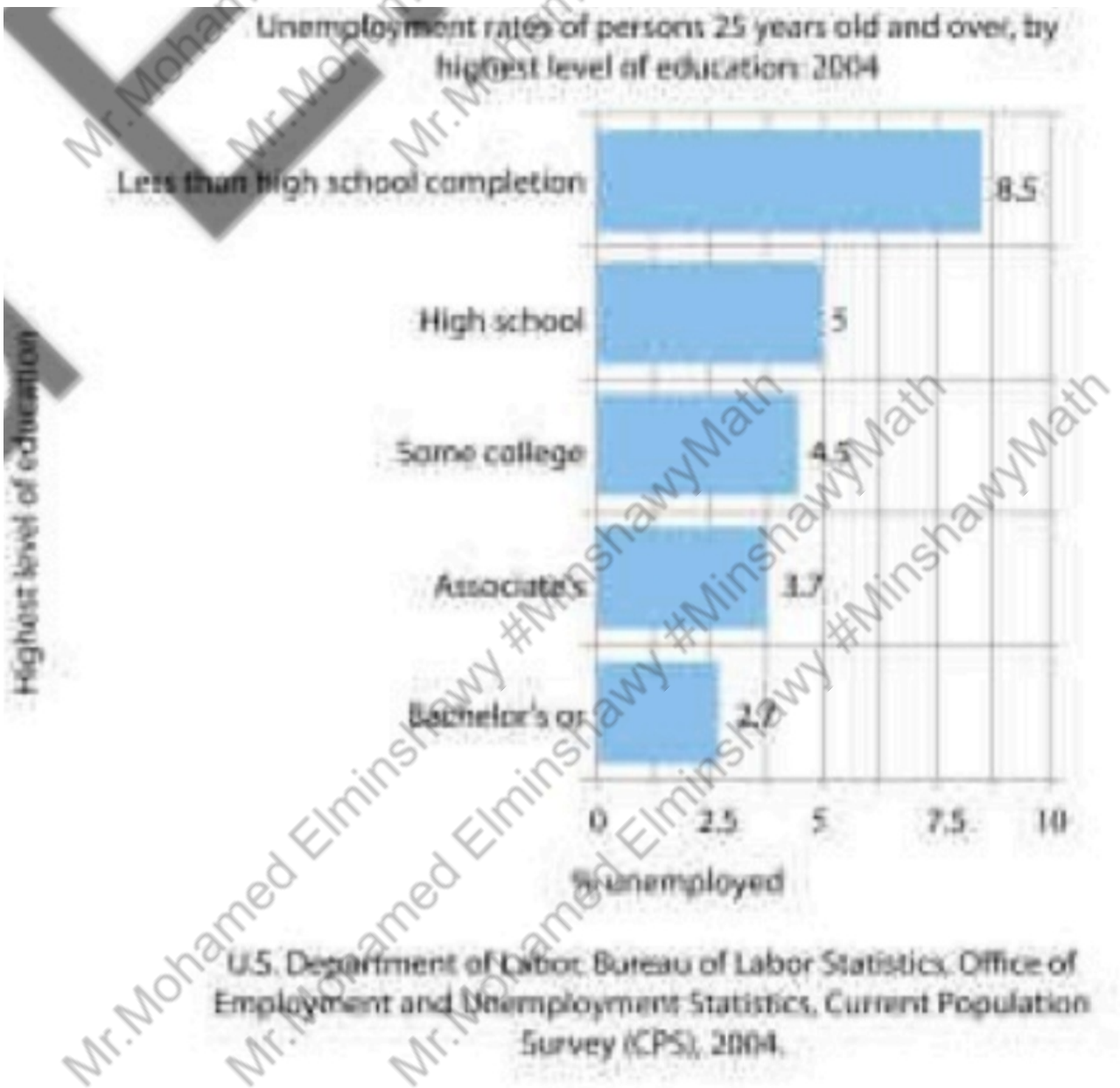
The correct answer is: 25%

Question 12

Not answered

Marked out of 1.00

In the figure below, what is the unemployment rate to those who at most had completed high school?



Select one:

- a. 13.5%
- b. 5%
- c. 15.9%
- d. 8.5%

Your answer is incorrect.

The correct answer is: 13.5%

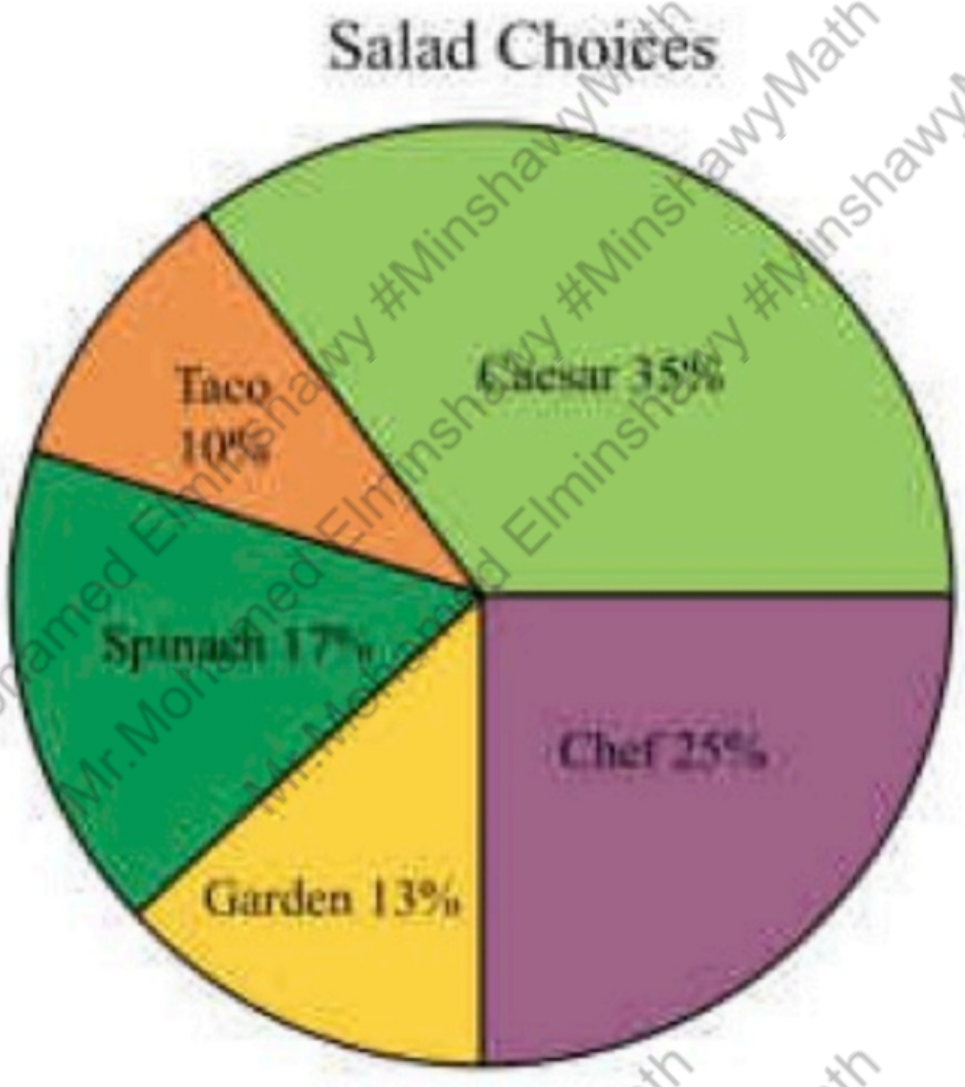
Question 13

Not answered

Marked out of 1.00

Questions 13 to 14 refer to the following information.

The pie chart below shows the results of a survey that asked the question "What is your favorite kind of salad?"



. What is the second favored salad?

Select one:

a. Spinach

b. Chef

c. Caesar

d. Garden

Your answer is incorrect.

The correct answer is: Chef

Question 14

Not answered

Marked out of 1.00

If 200 people were surveyed, what is the difference between the number of people who chose the Spanish salad and the taco salad ?

Select one:

a. 18

b. 7

c. 14

d. 24

Your answer is incorrect.

The correct answer is: 14

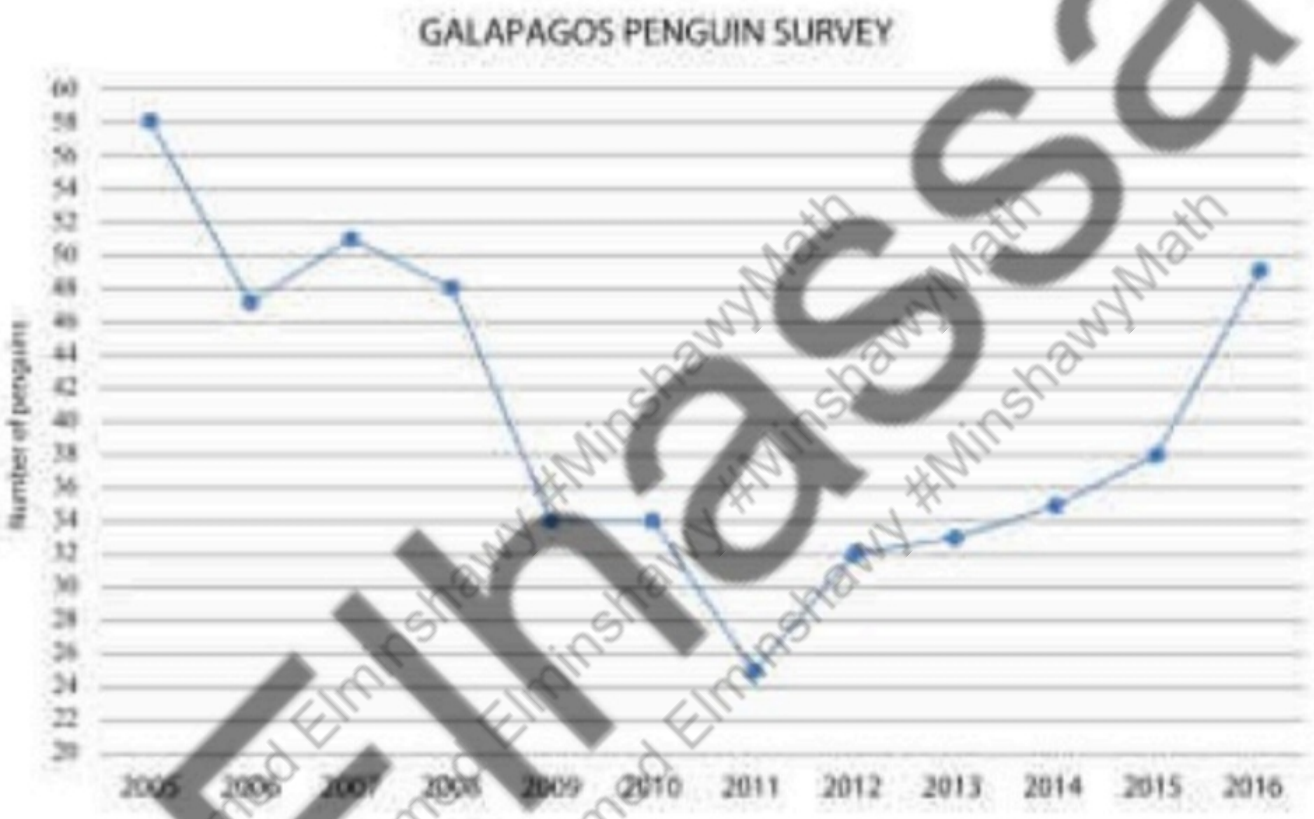
Question 15

Not answered

Marked out of 1.00

Questions 15 to 16 refer to the following information.

A survey of the endangered Galapagos penguins was carried out on a small Galapagos island and the results are shown below.



15. How much did the population decrease between 2007 and 2009?

A. 33.3%

B. 66.6%

C. 17%

D. 50%

Select one:

a. A

b. B

c. C

d. D

Your answer is incorrect.

The correct answer is: A

Question 16

Not answered

Marked out of 1.00

Which two consecutive years showed the largest Increase in the population of penguins?

Select one:

a. 2015 - 2016

b. 2014 - 2015

c. 2011 - 2012

d. 2006 - 2007

Your answer is incorrect.

The correct answer is: 2015 - 2016

Question 17

Not answered

Marked out of 1.00

For the numbers listed below, the only mode is 5 and the median Is 6. Each of the following could be the value of n except

5,6,5,6,7,5,5,n,6

Select one:

a. 7

b. 9

c. 6

d. 8

Your answer is incorrect.

The correct answer is: 6

Information

Questions 18 to 20 refer to the following information.

The following table represents the distribution of 100 persons according to their blood groups.

Covid/Blood group	O	A	B	AB
Covid +	32	40	6	2
Covid -	7	6	2	5

Question 18

Not answered

Marked out of 1.00

One person is randomly chosen then interviewed. What is the probability that the person interviewed tests negative for covid ?

Select one:

- a. 0.8
- b. 0.55
- c. 0.2
- d. 0.15

Your answer is incorrect.

The correct answer is: 0.2

Question 19

Not answered

Marked out of 1.00

The person interviewed tests positive for Covid. What is the probability that this person is of blood group A?

Select one:

a. $\frac{1}{2}$

b. $\frac{23}{40}$

c. $\frac{23}{50}$

d. $\frac{4}{5}$

Your answer is incorrect.

The correct answer is: $\frac{1}{2}$

Question 20

Not answered

Marked out of 1.00

Two persons are randomly chosen, one after another, and asked about their blood groups. Calculate the probability that the two chosen persons are of blood group B and test positive for Covid?

Select one:

a. $\frac{1}{330}$

b. $\frac{14}{2475}$

c. $\frac{9}{2500}$

d. $\frac{1}{3}$

Your answer is incorrect.

The correct answer is: $\frac{1}{330}$

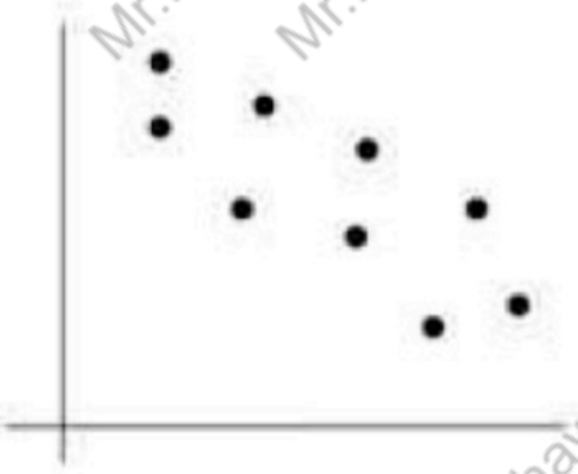
Question 21

Not answered

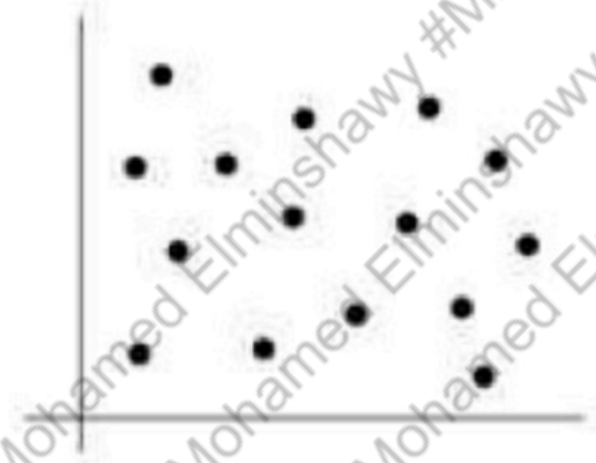
Marked out of 1.00

1. Which of the following graphs best shows a strong positive association?

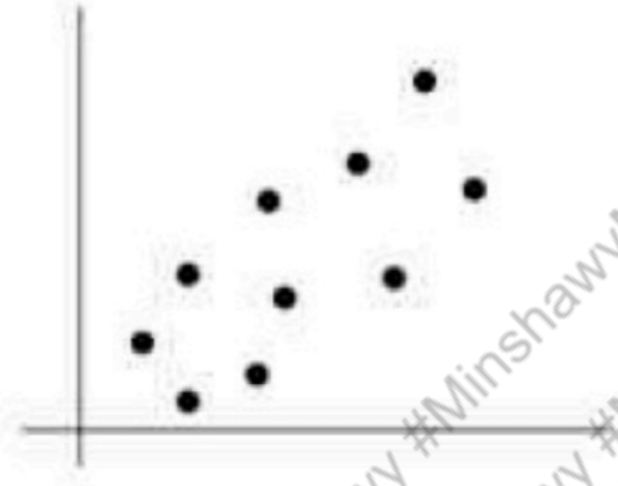
A.



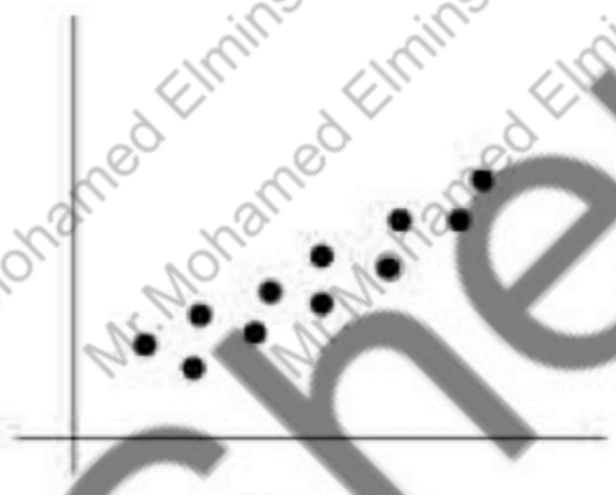
B.



C.



D.



Select one:

- a. A
- b. B
- c. C
- d. D

Your answer is incorrect.

The correct answer is: D

Question 22

Not answered

Marked out of 1.00

The graph of $x = -y^2 + 3$ ano the graph of the line L intersect at (0,p) and (1,q). Which of the following is the largest possible slope of line L?

Select one:

- a. -\(\sqrt{3} \)-\(\sqrt{2} \)
- b. \(\sqrt{3} \)+2
- c. \(\sqrt{5} \)
- d. \(\sqrt{3} \)+\(\sqrt{2} \)

Your answer is incorrect.

The correct answer is: \(\sqrt{3} \)+\(\sqrt{2} \)

Question 23

Not answered

Marked out of 1.00

Let h be the function defined by h (x) =\(\sqrt{x} \) + 3. If 3h(v)=18, then which of the following is the value of h(\(\frac{v}{3} \)) ?

Select one:

a. \(\frac{ \sqrt{3} }{3} \)

b. \(\sqrt{3} \)+3

c. 6

d. 3\(\sqrt{3} \)

Your answer is incorrect.

The correct answer is: \(\sqrt{3} \)+3

Question 24

Not answered

Marked out of 1.00

Which of the following equations has the greatest number of real solutions?

Select one:

a. $x^2 + 3x - 2 = 3 + x$

b. $x^3 = 5 - x$

c. $e^x = x - 1$

d. $2x + 3 = x - 2$

Your answer is incorrect.

The correct answer is: $x^2 + 3x - 2 = 3 + x$

Question 25

Not answered

Marked out of 1.00

What is the simplified form of $\sqrt{a^4} \times \sqrt[3]{a^6 b^9} \times \sqrt[3]{b^{-12}}$ if $a > 0$ and $b < 0$?

Select one:

- a. ab
- b. a^4b^6
- c. a^4
- d. $-a^4$

Your answer is incorrect.

The correct answer is: $-a^4$

Question 26

Not answered

Marked out of 1.00

How many real solutions does the equation $\left| \begin{matrix} x+3 \end{matrix} \right| +1 = x+4$ admit ?

Select one:

- a. 2
- b. 1
- c. Infinitely many
- d. 0

Your answer is incorrect.

The correct answer is: Infinitely many

Question 27

Not answered

Marked out of 1.00

If $x=1+e^{t}$ and $y=1-e^{-t}$, then x can be represented as

Select one:

a. $\frac{y-2}{y}$

b. $\frac{2-y}{1-y}$

c. 2-y

d. $\frac{1}{1-y}$

Your answer is incorrect.

The correct answer is: $\frac{2-y}{1-y}$

Question 28

Not answered

Marked out of 1.00

$$\frac{\sin^4 x-\cos^4 x+2\cos^2 x}{2\cos\frac{3\pi}{4}}=$$

Select one:

a. 2

b. -2

c. -$\frac{\sqrt{2}}{2}$

d. $\frac{\sqrt{2}}{2}$

Your answer is incorrect.

The correct answer is: -$\frac{\sqrt{2}}{2}$

Question 29

Not answered

Marked out of 1.00

Which of the following is an equation of the tangent to the circle of equation $x^2+y^2+2x=1$ at point (-2,1) ?

Select one:

a. y=x-3

b. y=-x-3

c. y=x+3

d. y=-x+3

Your answer is incorrect.

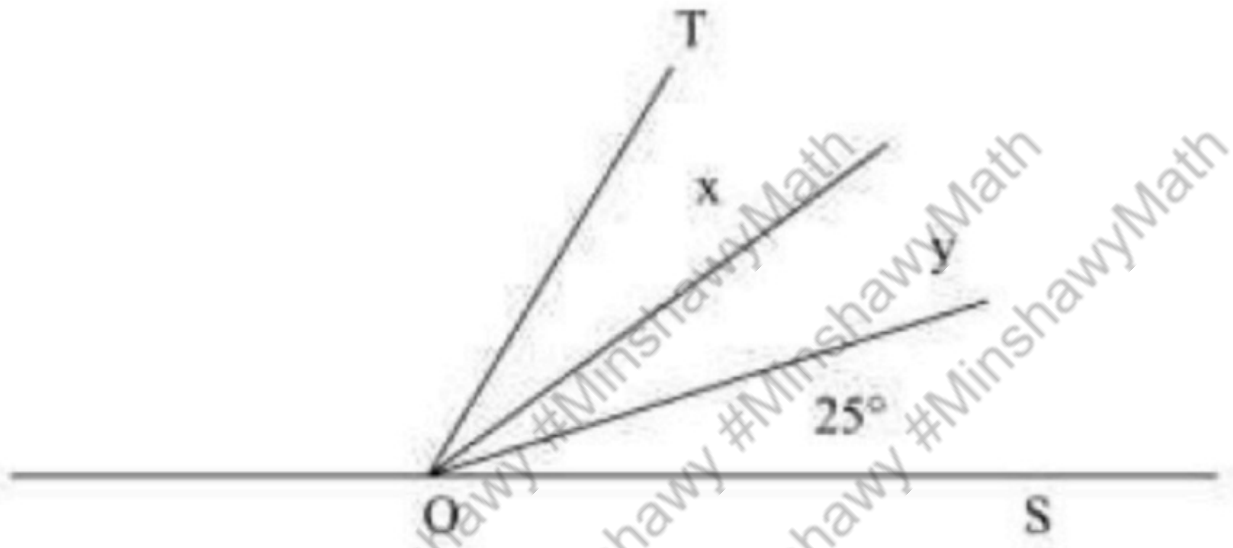
The correct answer is: y=x+3

Question 30

Not answered

Marked out of 1.00

In the figure below, $\angle TOS = 80°$ and $x > 20°$. Which of the following must be true about y? (figure not drawn to scale)



Select one:

- a. $y > 35°$
- b. $y = 35°$
- c. $y < 35°$
- d. $y > 45°$

Your answer is incorrect.

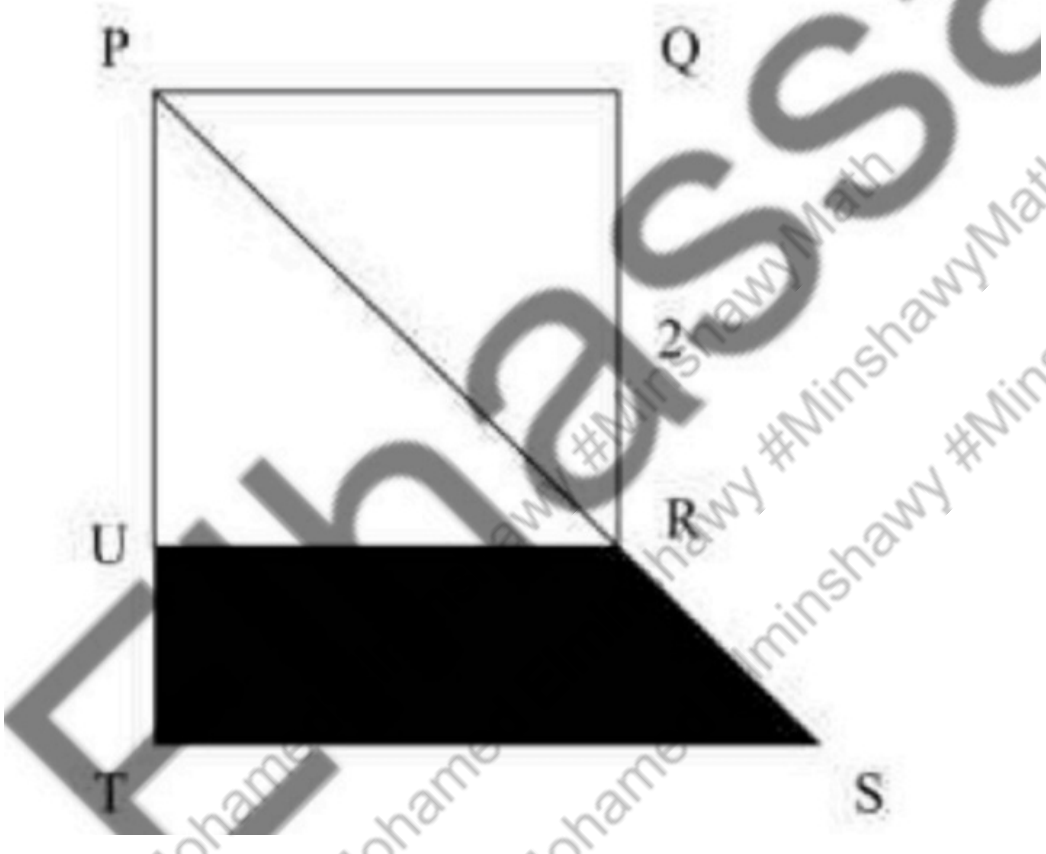
The correct answer is: $y < 35°$

Question 31

Not answered

Marked out of 1.00

In the figure below, TPS is a right isosceles triangle, with the right angle at T. UROP is a square of side 2 and PS = 3. What is the area of the shaded region TSRU? (figure not drawn to scale)



Answer:

The correct answer is: 1/4

Question 32

Not answered

Marked out of 1.00

In the polynomial below, a is a constant. If the polynomial is divisible by y + 3. what is the value of a?

$y^3 + 3y^2 + axy + 4x$

Answer:

The correct answer is: 4/3

Question 33

Not answered

Marked out of 1.00

If we toss a pair of dice 720 times, approximately now many times should we expect to get a sum of 6?

Answer: ✗

The correct answer is: 100

Question 34

Not answered

Marked out of 1.00

The average height of 4 players of a 6-player volleyball team is 175. What does the average height of the other 2 players have to be if the average height of the entire team equals to 180?

Answer: ✗

The correct answer is: 190

Question 35

Not answered

Marked out of 1.00

A train covered a certain distance at a uniform speed. If the train would have been 20 km/hr faster, it would have taken 1 hour less than the scheduled time. And. if the train was slower by 10 km/hr. it would have taken 2 hours more than the scheduled time. What is the distance covered by the train?

Answer: ✗

The correct answer is: 40

Question 36

Not answered

Marked out of 1.00

If y varies directly with x^2, and If x = 4 when y = 4. what is the value of y when x = 2?

Answer: ✗

The correct answer is: 1

Question 37

Not answered

Marked out of 1.00

A shop makes customized shirts for different occasions. Their monthly fixed costs are $610. It costs $20 to make each shirt, and they sell for $50 each. To make a profit of $800, how many shirt must be sold?

Answer: ✕

The correct answer is: 47

Question 38

Not answered

Marked out of 1.00

38. When fidget spinners were first introduced in the market, Leonard decided to sell them in his toy shop. The number of spinners he sold every week is modeled by $N(w) = -w^2 + 10w$, where w is the number of weeks starting the first week of February and $N(w)$ is the number of spinners sold each week in hundreds. One particular week, Leonard realized that his sales were greater than the sales in any other week. What is this maximum number of sales?

Answer: ✕

The correct answer is: 25