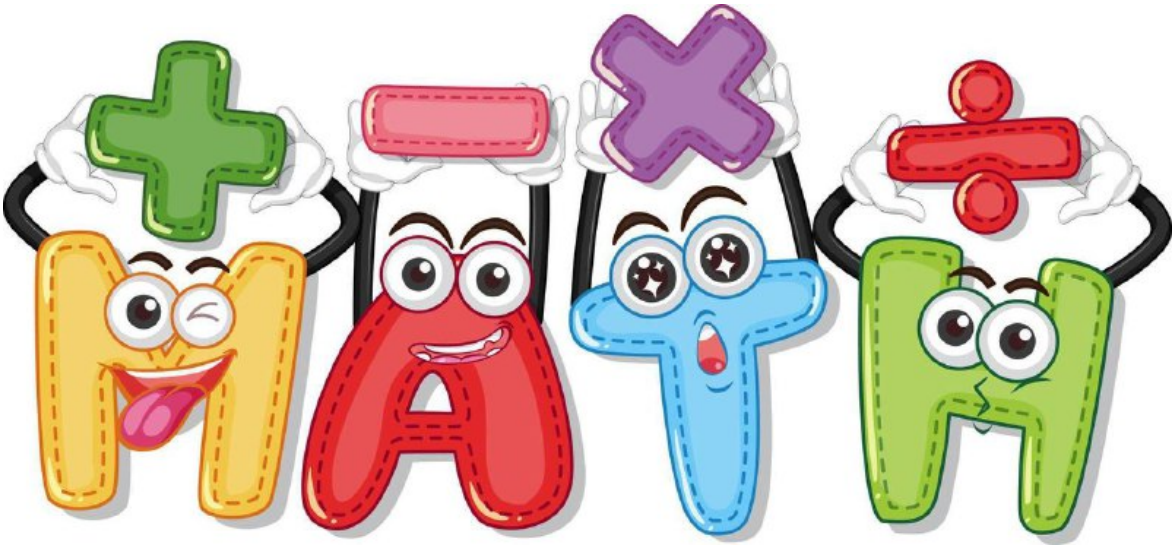
MATH FINAL EXAM REVISION

9 ADV (REVEAL) - T2 .

DONE BY : SSHHOOSSOO .



NAME : .....

CLASS : .....

SCORE : 100 /

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Q1 : Solve systems of equations by eliminating a variable using multiplication and addition.

$$8x + 3y = 4$$

$$-7x + 5y = -34$$

SELECT AN ANSWER :

A. (2 , - 4) B. (- 2 , 4)

C. (- 2 , - 4) D. (2 , 4)

Q2 : calculate measures of line segments

$$XY = 7a \ , \ YZ = 5a \ , \ XZ = 6a + 24$$

SELECT AN ANSWER :

A. 4 B. 10

C. 20 D. 96

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Q3 : Solve linear equations by graphing systems of equations.

$$x - y = -2$$

$$-x + y = 2$$

SELECT AN ANSWER :

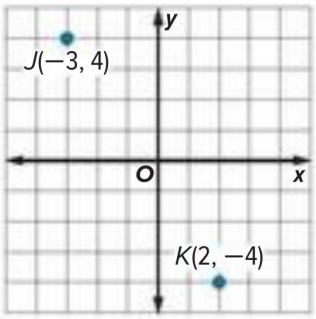
A. -2 , ONE SOLUTION

B. 55 , NO SOLUTION

C. 12 , ∞ SOLUTION

D. -33 , ONE SOLUTION

Q4 : Find the distance between two points on the coordinate plane.



SELECT AN ANSWER :

A. 6.7

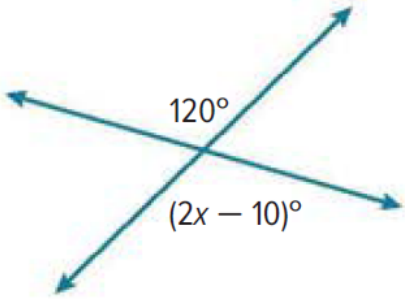
B. 10

C. 81

D. 9.4

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Q5 : Analyze figures characteristics of adjacent angles, linear pairs of angles, and vertical angles



SELECT AN ANSWER :

A. x = 12

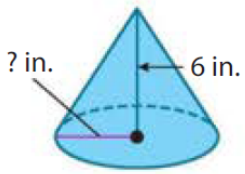
B. x = 91

C. x = 35

D. x = 65

Q6 : Calculate surface areas and volumes.

19. A disposable cup is in the shape of a cone, as shown. The cup has a volume of about 48.8 in^3. What is the radius of the cup to the nearest inch?



SELECT AN ANSWER :

A. 5.2

B. 2.78

C. 9.7

D. 7.0

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Q7 : Identify points, lines, and planes

1. Name the lines that are only in plane Q.



SELECT AN ANSWER :

A. P

B. n , q

C. H , L

D. G

Q8 : Solve systems of equations by using the substitution method

$$y = 4x + 5$$

$$2x + y = 17$$

SELECT AN ANSWER :

A. (2 , 13)

B. (13 , 2)

C. (- 2 , - 13)

D. (- 13 , 2)

Q9 : Solve systems of equations by eliminating a variable using addition.

$$3j + 4k = 23.5$$

$$8j - 4k = 4$$

SELECT AN ANSWER :

A. (5 , 6)

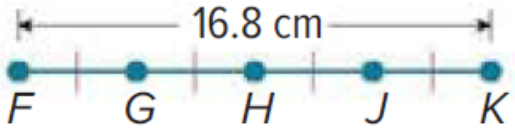
B. (11 , 0)

C. (2.5 , 4)

D. (- 3 , - 4)

Q10 : Apply the definition of congruents line segments to find missing values

$\overline{FG}$



SELECT AN ANSWER :

A. 5.7

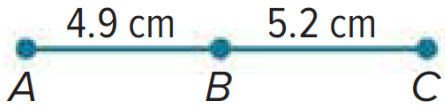
B. 4.2

C. 17.9

D. 8.6

Q11 : Find the length of a line segment on a number line.

$\overline{AC}$



SELECT AN ANSWER :

A. 5.3

B. 1.3

C. 9.1

D. 10.1

Q12 : determine the number of solutions of a system of liner equations.

$$y = -\frac{3x}{2} + 5$$

$$y = -\frac{2x}{3} + 5$$

SELECT AN ANSWER :

A. NO SOLUTION , INCONSISTENT

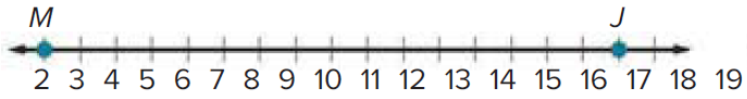
B. ONE SOLUTION , CONSISTENT , INDEPENDENT

C. INFINTELY MANY SOLUTION , CONSISTENT , DEPENDENT

Q13 :

Find a point on a directed line segment on a number line that is a given fractional distance from the initial point.

Find the coordinate of point B that is $\frac{1}{4}$ of the distance from M to J.



SELECT AN ANSWER :

A. 9

B. 14

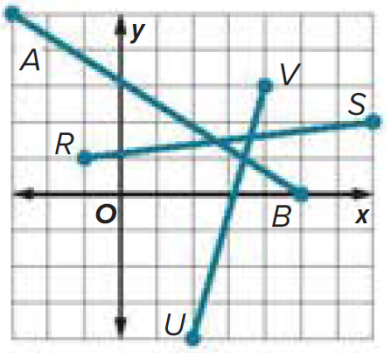
C. 6

D. 10

Q14 :

Find a point that partitions a directed line segment on the coordinate plane in a given ratio.

Find point G on $\overline{AB}$ such that the ratio of AG to GB is 3:2.



SELECT AN ANSWER :

A. (2 , 5)

B. (9 , 2)

C. $\left(\frac{9}{5}, 2\right)$

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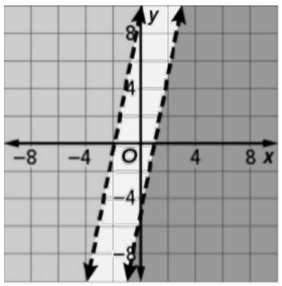
Q15 :

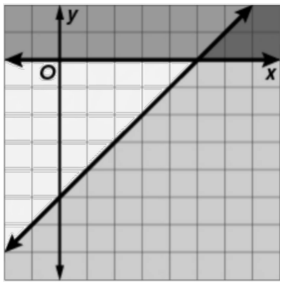
Solve systems of linear inequalitis by by graphing

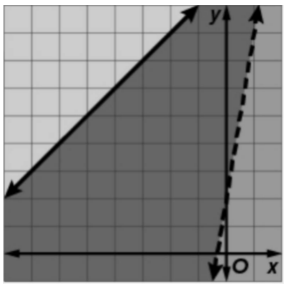
$$y < 5x - 5$$

$$y > 5x + 9$$

SELECT AN ANSWER :

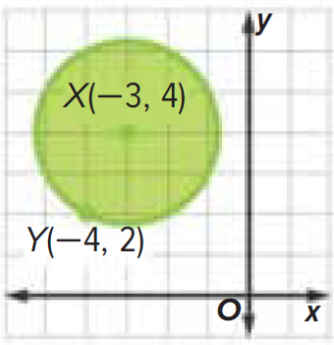
A. 

B. 

C. 

Q16 :

Find perimeters, circumference, and areas of two-dimensional geometric shapes.



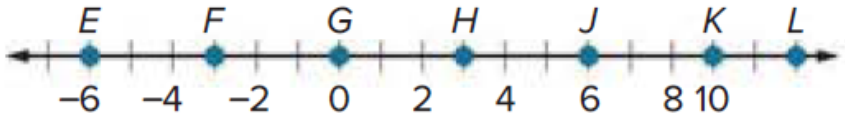
$$\begin{aligned} r &= \sqrt{(4-2)^2+(-3-(-4))^2} \\ &= \sqrt{(2)^2+(1)^2} \\ &= \sqrt{4+1} \\ &= \sqrt{5} \end{aligned}$$

$$\begin{aligned} C &= 2\pi r \\ &= 2\pi(\sqrt{5}) \\ &\approx 14.0 \text{ cm} \end{aligned}$$

$$\begin{aligned} A &= \pi r^2 \\ &= \pi(\sqrt{5})^2 \\ &\approx 15.7 \text{ cm}^2 \end{aligned}$$

Q17 :

Find the coordinates of the midpoint of a segment with the given endpoints



$\overline{FK}$ $\overline{FG}$

$$M = \frac{x_1 + x_2}{2} = \frac{-3+9}{2} = 3$$

The midpoint of $\overline{FK}$ is 3.

$$M = \frac{x_1 + x_2}{2} = \frac{-3+0}{2} = -1.5$$

The midpoint of $\overline{FG}$ is –1.5.

Q18 :

Find perimeters, circumference, and areas of two-dimensional geometric shapes.

$\overleftrightarrow{WX}$ and $\overleftrightarrow{YZ}$ intersect at point V. If $m\angle WVY = (4a + 58)°$ and $m\angle XVY = (2b - 18)°$, find the values of a and b such that $\overleftrightarrow{WX}$ is perpendicular to $\overleftrightarrow{YZ}$.

for wx and yz to be perpendicular , m ∠wvy and m ∠xvy must both be 90°

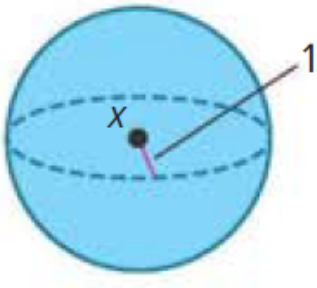
m ∠wvy = 4a + 58 m ∠xvy = 2b - 18

90 = 4a + 58 so a = 8 90 = 2b - 18 so b = 54

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Q19 :

Calculate surface areas and volumes.



The solid is a sphere and has no base.

$S = 4\pi r^2$

$S = 4\pi(1.8)^2$

$S = 12.96\pi$ or 40.7 cm^2

$V = \frac{4}{3}\pi r^3$

$V = \frac{4}{3}\pi(1.8)^3$

$V = 7.776\pi$ or 24.4 cm^3

ANSWER:

12.96π or about 40.7 cm^2; 7.776π or about 24.4 cm^3

Q20 :

Calculate angle measures using the characteristics complementary and supplementary angles

$\angle E$ and $\angle F$ are complementary. The measure of $\angle E$ is 54° more than the measure of $\angle F$. Find the measure of each angle.

If two angles are complementary, then the sum of the angle measures is 90°. Let $x = \angle F$. Then the measure of $\angle E$ is $x + 54$.

First, solve for x.

$x + x + 54 = 90$

$2x + 54 = 90$

$2x = 36$

$x = 18$

Next, find the measure of $\angle E$.

$x + 54 = 18 + 54$

$= 72$

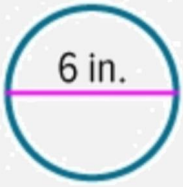
The measure of $\angle F = 18°$ and $\angle E = 72°$.

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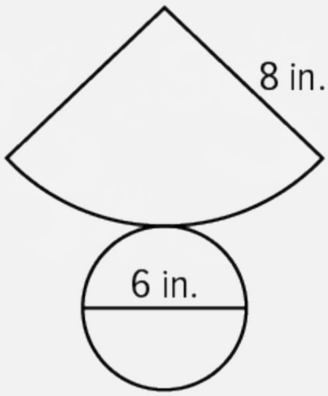
Q21 : **Calculate surface areas of three-dimensional figures represented by nets, and determine the correct nets for three-dimensional geometric figures**



Start by drawing the circular bottom of the cone represented by a part hat.



Next, draw the sector for the curved side of the cone attaching to the circle. Compare your net to the original figure to ensure that the dimensions are correct.



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بالتوفيق لكم
جميعاً 3› .