

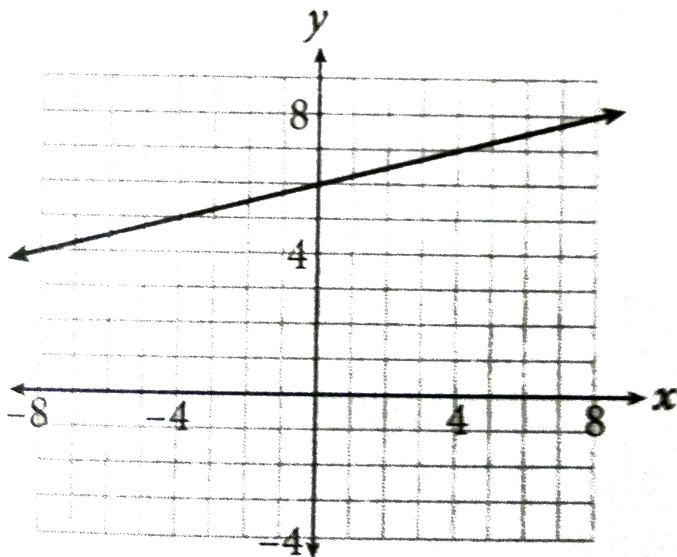


MATHS

BOOKS - KAPLAN INC MATHS (ENGLISH)

LINEAR EQUATIONS

Multiple Choice Question



1.

Which of the following equations represents the line shown in the graph?

A. $y = 6x + \frac{1}{4}$

B. $y = \frac{x}{4} + 6$

C. $y = 4x + 6$

$$D. y = 6x + 4$$

Answer: B



Watch Video Solution

2. A lemonade stand's profit is given by the equation $p = 2c - 8.5$. Which of the following does the number 2 most likely represent?

A. The price of one cup of lemonade

B. The profit generated from the sale of one cup of lemonade

C. The minimum number of cups of lemonade that must be sold to earn a profit

D. The costs that must be recuperated before the lemonade stand earns any profits

Answer: A



Watch Video Solution

3. Darien needs to buy several white dress shirts for his new job. He finds one he likes for \$35 that is on sale for 40% off. He also likes a blue tie that costs \$21. Which of the following represents the total cost, not including tax. If Darien buys x of the white shirts that are on sale and two of the blue ties?

A. $C = 14x + 42$

B. $X = 21x + 21$

C. $C = 21x + 42$

$$D. C = 35x + 42$$

Answer: C



Watch Video Solution

$$4. \frac{z}{6} \left(\frac{3}{2} \right) - 7 = -2(3z - 4)$$

Which value of z satisfies the equation above?

A. $-\frac{21}{5}$

B. $\frac{-4}{25}$

C. $\frac{4}{25}$

D. $\frac{12}{5}$

Answer: D



Watch Video Solution

5. Line L passes through the coordinate points $\left(\frac{-7}{2}, 3\right)$ and $\left(\frac{-3}{2}, 5\right)$. What is the slope of line L?

A. -1

B. $\frac{-2}{5}$

C. $\frac{2}{5}$

D. 1

Answer: D



Watch Video Solution

6. $17(6x - 50) = 204\left(\frac{7}{24}x\right)$

For what value of x is the equation above true?



Watch Video Solution

7. Line L has an undefined slope. Line M is perpendicular to line L. Which of the following could be the equation of line M?

A. $x = y$

B. $y = 7$

C. $x = -3$

D. $xy = 4$

Answer: B



Watch Video Solution

8. A line in the xy -plane that passes through the coordinate points $(3, -6)$ and $(-7, -4)$ will never intersect a line that is represented by which of the following equations?

A. $x + 5y = 6$

B. $x + \frac{y}{2} = 7$

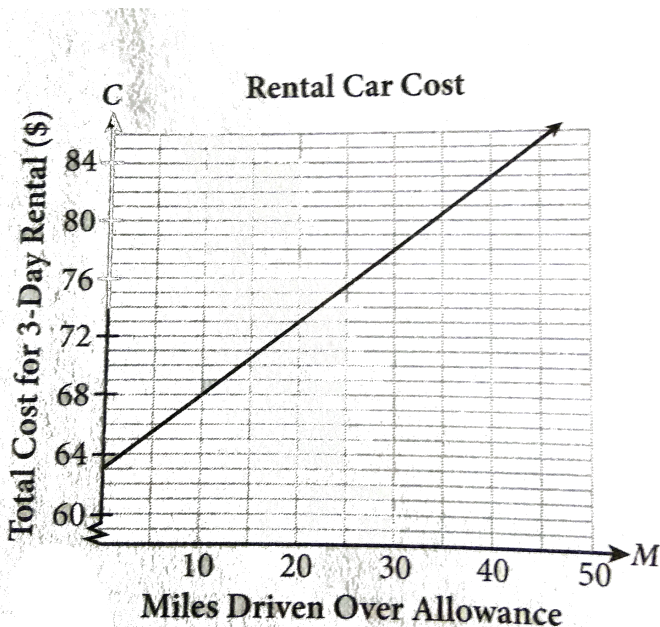
C. $y - 2x = -9$

D. $2y - x = -8$

Answer: A



Watch Video Solution



9.

A car rental agency charges a per day rental fee which includes a daily mile age allowance plus a certain amount per mile driven over the allowance. The graph above compares the

miles driven over the allowance and the total cost for a 3-day rental. What does the C-intercept most likely represent in this scenario?

- A. The per day rental fee for renting the car
- B. The number of mile a rental may drive the car per day
- C. The penalty a renter must pay if the daily mileage allowance is exceeded
- D. The total cost of a 3-day rental assuming the car is not driven over the allowance

Answer: D



Watch Video Solution

10. $\frac{2}{3}x + 3y = 2$

If the slope of the equation shown above is 6.

What is the value of c ?

A. -4

B. $-\frac{1}{9}$

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

D. 4

Answer: B



Watch Video Solution

11. Anneke is completing in a 500-meter freestyle swim event, which consists of swimming the length of a pool 20 times. If Anneke averages 26.4 seconds per length of the pool. Which of the following equations could be used to determine the number of meter(m) Anneke has left in the event after swimming for s seconds?

$$\text{A. } m = 500 - \frac{25s}{26.4}$$

$$\text{B. } m = 500 - 25s$$

$$\text{C. } m = \frac{25s}{26.4}$$

$$\text{D. } m = 500 - 20s$$

Answer: A



Watch Video Solution

12. If the graph of the equation $y = 5x + 3$ is shifted down 4 units, what is the x-intercept of the new line?

A. -1

B. $\frac{1}{5}$

C. 1

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

Answer: B



Watch Video Solution

13. A new color copier purchased for \$8,500 is expected to depreciate(lose value) according to the equation $y = -1,250x + 8,500$

where y is the value of the copier x years after it was purchased. The company that bought the copier plans to sell it when the value is \$1,000 and upgrade to a new one. How many years after the copier is purchased will the company sell it?



[Watch Video Solution](#)

14.
$$\frac{3(h + 2) - 4}{6} = \frac{h(7 \times 2 - 5)}{2}$$

In the equation above, what is the value of h ?



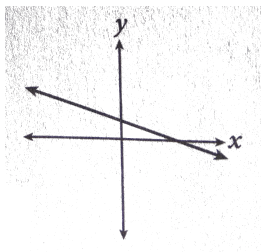
[Watch Video Solution](#)

15. If $\frac{2}{3}j - \frac{1}{4}k = \frac{5}{2}$, what is the value of $8j - 3k$?



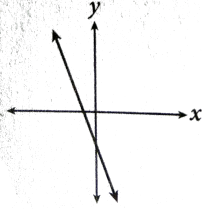
Watch Video Solution

16. If w is an integer less than -1 , which of the following could be the graph of $x + wy = wx - y - 3$?

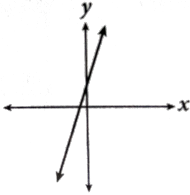


A.

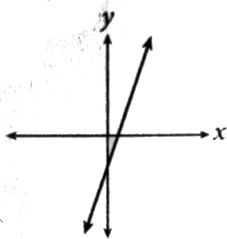
B.



C.



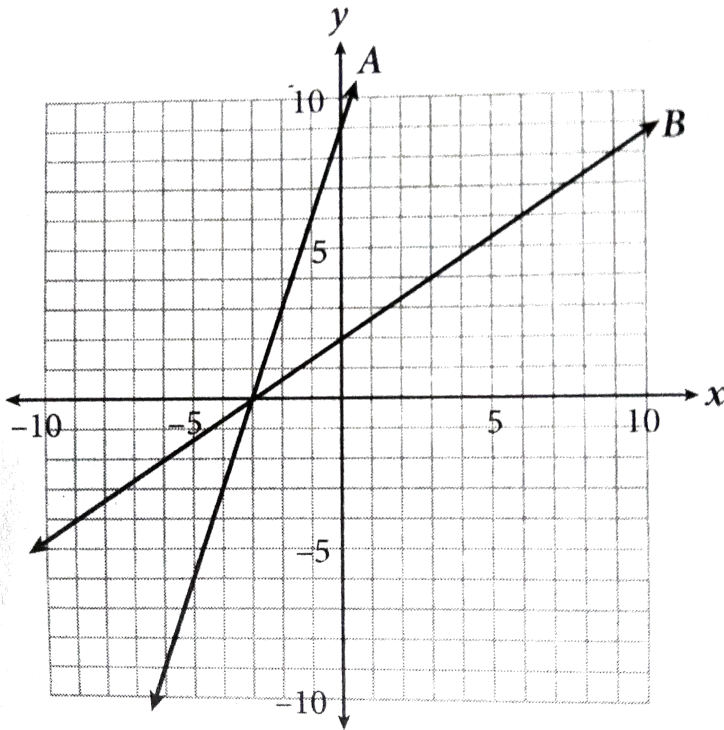
D.



Answer: C



Watch Video Solution



17.

If the equation of line A shown on the graph is given by $y = mx + b$, and the equation of line B is given by $y = k(mx + b)$, what is the value of k ?

A. $\frac{1}{6}$

B. $\frac{2}{9}$

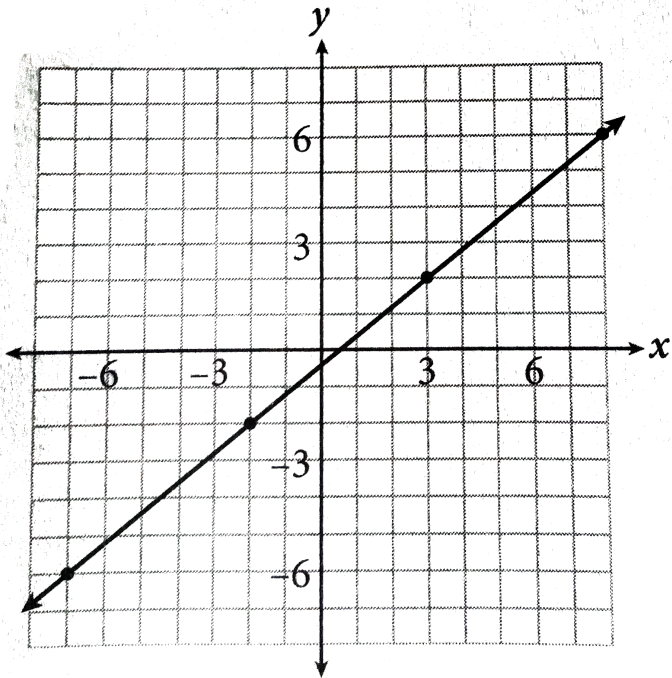
C. 6

D. 9

Answer: B



Watch Video Solution



18.

If the equation of line shown on the graph is written in standard form, $Ax + By = C$, and $A=3$, what is the value of B ?

A. $\frac{-15}{4}$

B. $\frac{-5}{4}$

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

D. 15

Answer: A



Watch Video Solution

19. What garages each charge a fixed amount, plus an hourly rate, to service a car. The garage on Main street charged one customer \$153 for a 2 hour service appointment, and it

charged a second customer \$315 for a 5 hour service appointment. The garage on 2nd Street charges \$5 less per hour than the garages on Main Street and \$10 more for the fixed amount. How much would the garage on 2nd Street charge for a 3 hour service appointment?

A. 157

B. 174

C. 181

D. 202

Answer: D



Watch Video Solution

20. $\frac{1}{2}(6x - 4) - (3 - x) = ax + x + b$

If the equation above has infinity many solutions, what is the value of a-b?



Watch Video Solution