1. Which set of ordered pairs represents a linear relationship?

   A $\{(0, 1), (0, -1), (-1, 1), (-1, 2)\}$

   B $\{(2, 2), (3, 3), (4, 3), (5, 3)\}$

   C $\{(-1, -4), (-1, 0), (0, 1), (1, -4)\}$

   D $\{(2, 3), (3, 4), (4, 5), (5, 6)\}$

2. Which linear function has a graph that includes all of the points in the table below?

x	y
-3	4
-2	3
0	1
1	0

   A $y = -2x - 2$

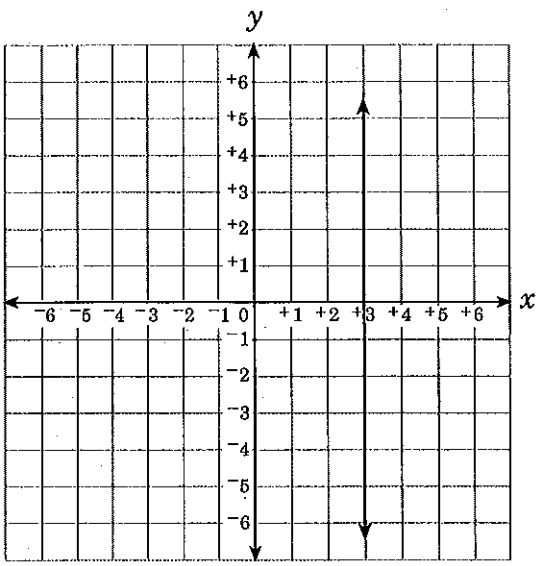
   B $y = -x + 1$

   C $y = x - 1$

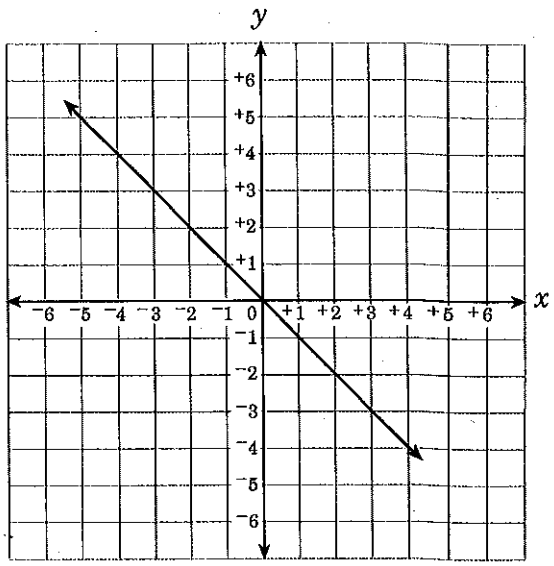
   D $y = 2x + 1$

3. Which is the graph of $x = y$?

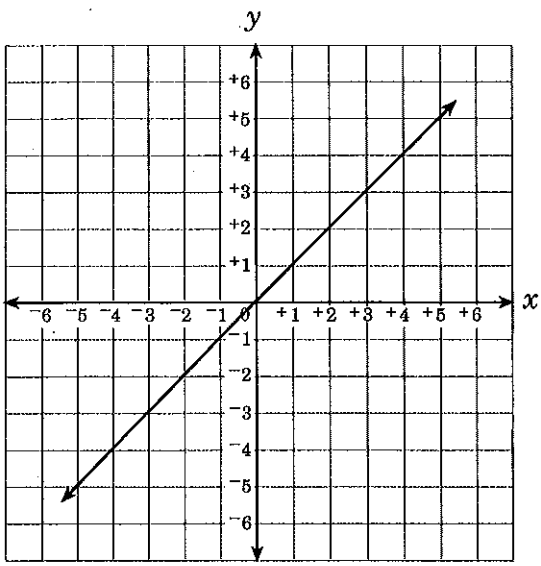
A



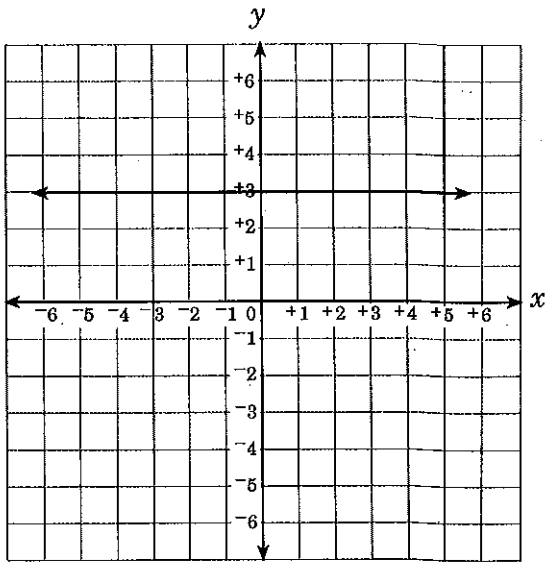
B



C

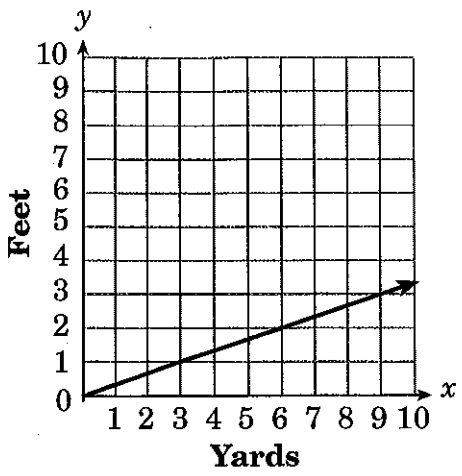


D

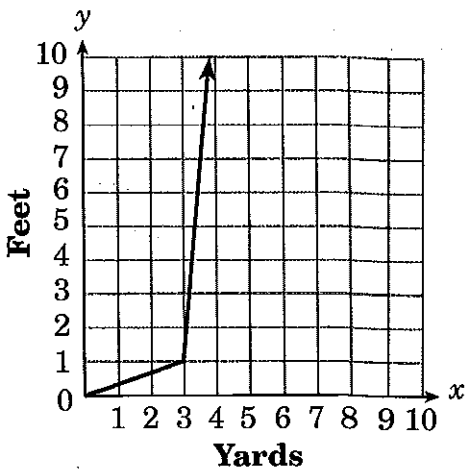


4. In the equation $y = 3x$, x represents yards and y represents feet. Which is the graph of this equation?

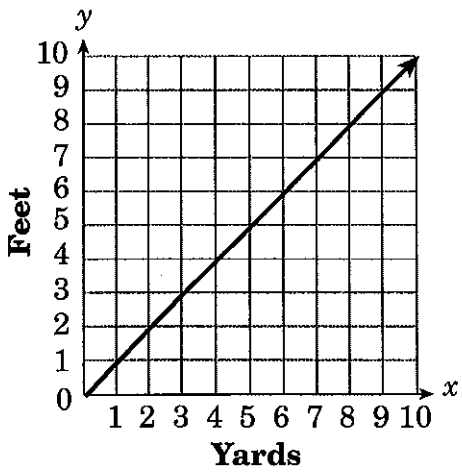
A



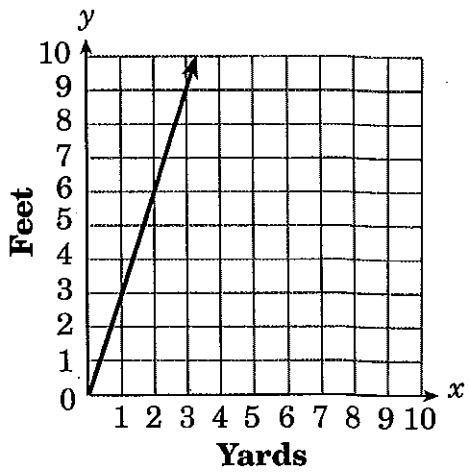
B



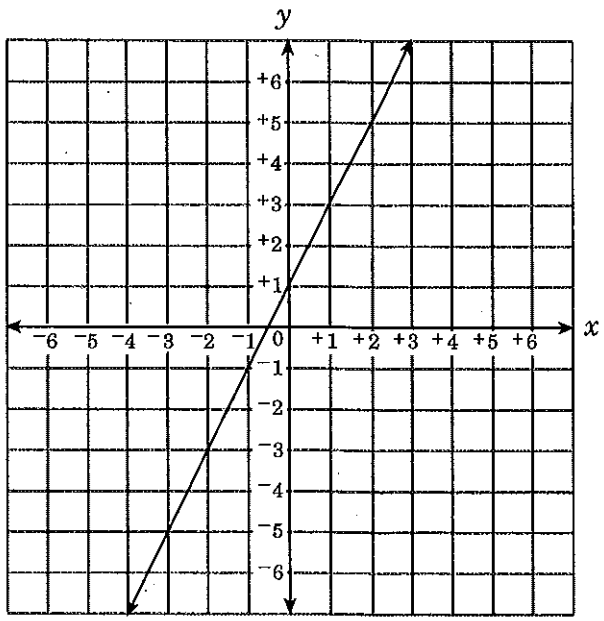
C



D



5. Which equation describes the line graphed below?



A $x - y = 0$

B $x - y = ^{-}1$

C $2x - y = ^{-}1$

D $x + 2y = ^{-}3$

6. The price of a large pizza is given by the formula $P(t) = 1.5t + 7.50$, where $P(t)$ is the price of the pizza and t is the number of toppings. What does the slope represent?

A number of toppings

B cost per slice

C cost of each topping

D cost of the pizza with no toppings

7. The cost to rent a truck is \$60 per day plus an additional \$0.45 for each mile (m) driven. To rent a handcart, there is an additional cost of \$5 per day. Jonathan is going to rent a truck and handcart for 2 days. Which equation shows the total amount (R) Jonathan will pay if he drives m miles?

A $R = \$130 + \$0.45m$

B $R = \$65 + \$0.45m$

C $R = \$120 + \$0.45m$

D $R = \$0.45 + \$130m$

8. What are the coordinates of the x-intercept for the line that goes through points $(^{-}3, ^{-}2)$ and $(3, 6)$?

A $(^{-}2, 0)$

B $\left(\frac{^{-}3}{2}, 0\right)$

C $\left(\frac{3}{4}, 0\right)$

D $(2, 0)$

9. Which line has the greatest slope?

A $x + 4y = 6$

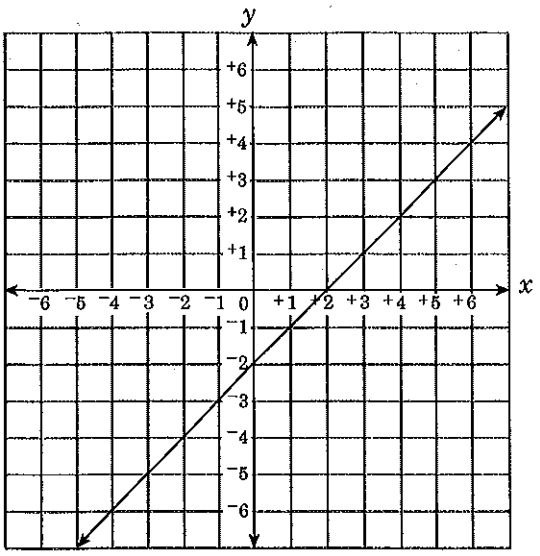
B $x - 4y = 6$

C $3x - 8y = 1$

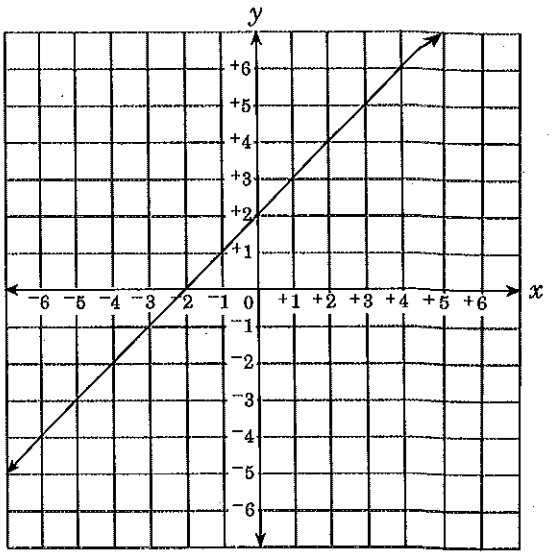
D $2x - 10y = 3$

10. Which is the graph of the equation $y = x - 2$?

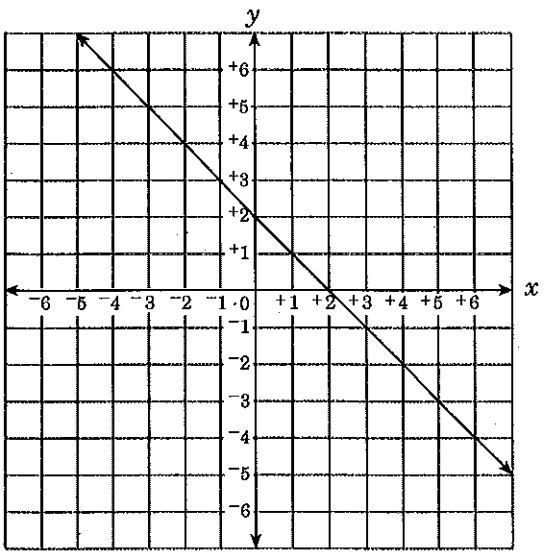
A



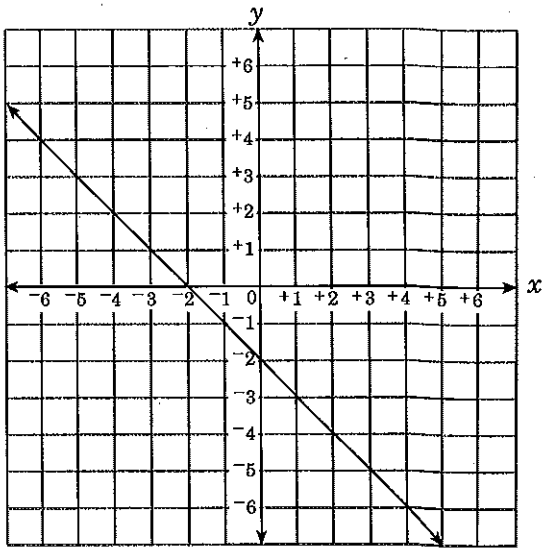
B



C



D



11. Which is an equation of the line that passes through the points $(^{-}2, 4)$ and $(5, 3)$?

A $y = {}^{-}7x + 4$

B $y = 7x + 3$

C $y = \frac{1}{7}x - \frac{26}{7}$

D $y = \frac{^{-}1}{7}x + \frac{26}{7}$

12. A line has a slope of $\frac{2}{3}$ and a y-intercept of $^{-}4$. Which of the following is an equation of the line?

A $2x - 3y = 12$

B $2x - 3y = {}^{-}4$

C $3x - 2y = {}^{-}4$

D $3x - 2y = 12$

13. Which is an equation of the line that has a slope of $\frac{^{-}2}{3}$ and passes through the origin?

A $2x + 3y = 0$

B $3x + 2y = 0$

C $2x - 3y = 0$

D $3x - 2y = 0$

14. Which equation describes the data in the table below?

x (% reduction [or increase] in dietary fat)	$^-6$	$^-4$	$^-2$	1	5
y (weight loss [or gain] in pounds)	$^-15$	$^-11$	$^-7$	$^-1$	7

A $2x + y = {}^-27$

B $x - y = 3$

C $x + y = {}^-21$

D $2x - y = 3$

15. The perimeter of a rectangular swimming pool is 42 m. The length is 5 meters more than the width. What is the length of the swimming pool?

A 8 m

B 10.5 m

C 13 m

D 16 m

16. A spring stretches linearly as weight is added. The table shows data collected for a certain spring.

Weight in lb (x)	**Stretch in cm** (y)
100	0.5
500	2.5
800	4.0
900	4.5
1,200	6.0

What is the slope of the line that fits these data?

A $\frac{1}{200}$

B $\frac{1}{100}$

C $\frac{1}{50}$

D $\frac{1}{2}$

17. Which value satisfies the inequality $2x + 14 - 5x < {}^{-}2x + 8$?

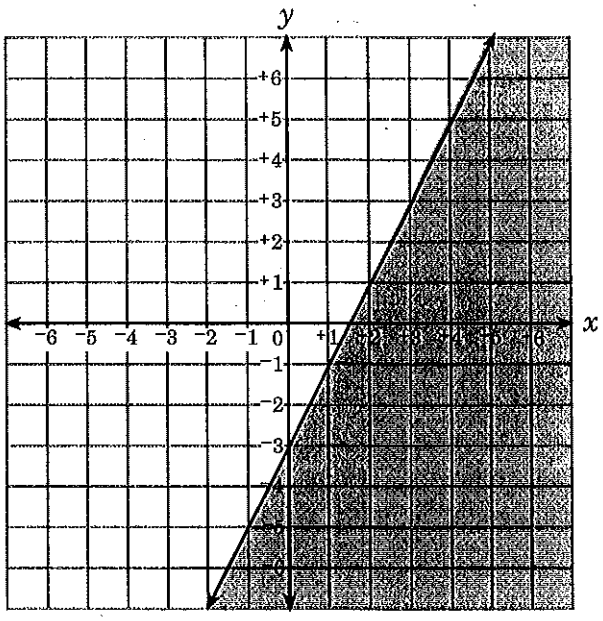
A $^{-}3$

B 2

C 6

D 7

18. The graph of $y \leq 2x - 3$ is shown.



Which set contains only points that satisfy the inequality?

A $\{(3, 3), (^{-}4, ^{-}11), (^{-}1, ^{-}8), (5, 0)\}$

B $\{(5, 7), (^{-}3, ^{-}10), (5, ^{-}7), (^{-}1, ^{-}4)\}$

C $\{(^{-}1, ^{-}10), (5, 8), (^{-}4, ^{-}13), (3, ^{-}2)\}$

D $\{(^{-}4, ^{-}12), (^{-}1, ^{-}5), (3, 4), (5, 6)\}$

19. Sally's mother said Sally can spend, at most, $25.00 on books and magazines. Books cost $3.00 each, and magazines cost $1.60 each. Which inequality represents the number of books, b, and magazines, m, Sally may purchase?

A $3b + 1.6m \geq 25$

B $3b + 1.6m \leq 25$

C $4.6bm \geq 25$

D $4.6bm \leq 25$

20. Solve for f:

$$e = 4g - 2f$$

A $f = 2g + \frac{1}{2}e$

B $f = 2g - e$

C $f = 2g - \frac{1}{2}e$

D $f = 2g + e$

21. What are the solutions for $x^2 - 4 = 0$?

A $\{0, ^-4\}$

B $\{^-4, 2\}$

C $\{^-2, 2\}$

D $\{0, 2\}$

22. A cube has a volume of $729\ cm^3$. What is the length of each edge of the cube?

A 9 cm

B 11 cm

C 121.5 cm

D 243 cm

23. If $s = \frac{w - 56}{^-7}$ and $s = 6$, what is the value of w?

A $^-57$

B $^-9$

C 7

D 14

24. Solve: $\frac{5x + 2}{15} = \frac{x}{5}$

A $x = -1$

B $x = -\frac{1}{5}$

C $x = \frac{1}{5}$

D $x = 1$

End of Goal 5 Sample Items

In compliance with federal law, including the provisions of Title IX of the Education Amendments of 1972, the Department of Public Instruction does not discriminate on the basis of race, sex, religion, color, national or ethnic origin, age, disability, or military service in its policies, programs, activities, admissions or employment.