

Linear Functions

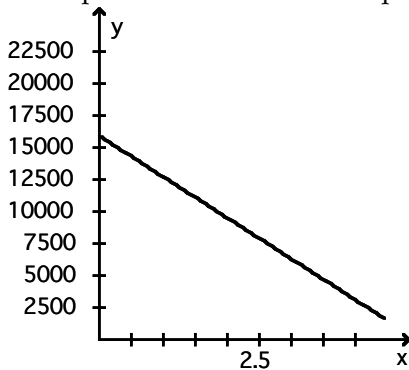
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the problem.

- 1) A truck rental company rents a moving truck one day by charging \$35 plus \$0.11 per mile. Write a linear equation that relates the cost C , in dollars, of renting the truck to the number x of miles driven. What is the cost of renting the truck if the truck is driven 160 miles? 1) _____
- A) $C(x) = 0.11x + 35$; \$52.60 B) $C(x) = 0.11x + 35$; \$36.76
C) $C(x) = 0.11x - 35$; -\$17.40 D) $C(x) = 35x + 0.11$; \$5600.11
- 2) Linda needs to have her car towed. Little Town Auto charges a flat fee of \$85 plus \$2 per mile towed. Write a function expressing Linda's towing cost, c , in terms of miles towed, x . Find the cost of having a car towed 3 miles. 2) _____
- A) $c(x) = 2x + 85$; \$91 B) $c(x) = 2x + 85$; \$81
C) $c(x) = 2x$; \$87 D) $c(x) = 2x$; \$6

Solve.

- 3) A school has just purchased new computer equipment for \$16,000.00. The graph shows the depreciation of the equipment over 5 years. The point $(0, 16,000)$ represents the purchase price and the point $(5, 0)$ represents when the equipment will be replaced. Write a linear equation in slope-intercept form that models the value of the equipment, y , x years after purchase. Use the model to predict the value of the equipment after 4 years? 3) _____

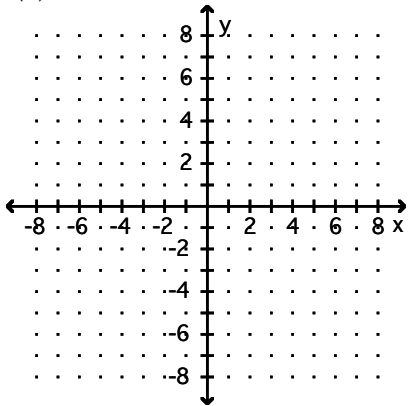


- A) $y = -16,000x + 16,000$;
value after 4 years is \$-48,000.00 B) $y = 16,000x + 5$;
value after 4 years is \$3200.00
C) $y = -3200x + 16,000$;
value after 4 years is \$3200.00; D) $y = 3200x - 16,000$;
value after 4 years is \$3200.00

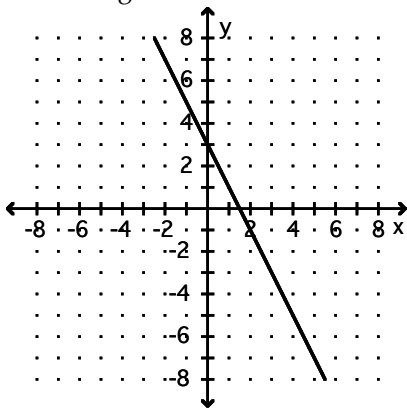
Graph the function. State whether it is increasing, decreasing, or constant.

4) $f(x) = 2x + 3$

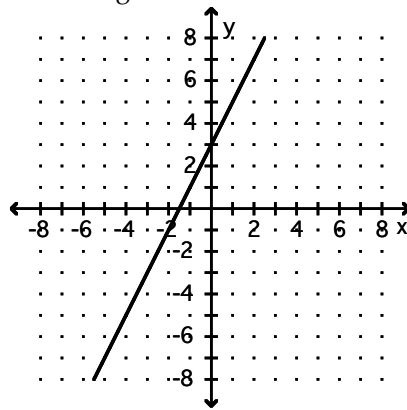
4) _____



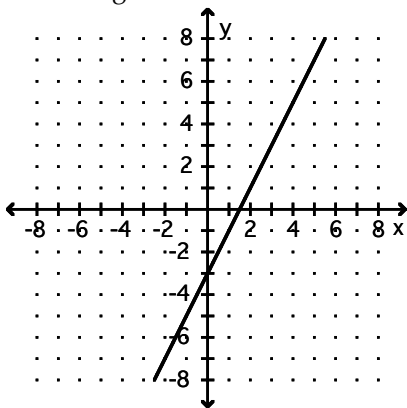
A) decreasing



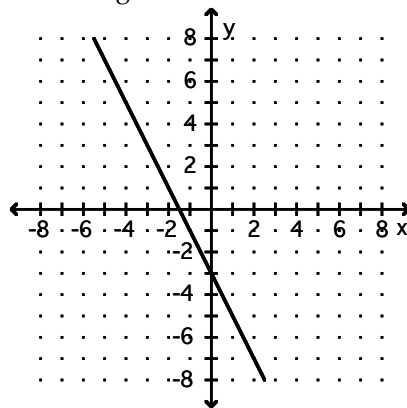
B) increasing



C) increasing

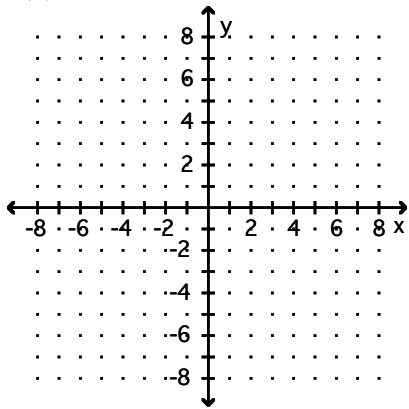


D) increasing

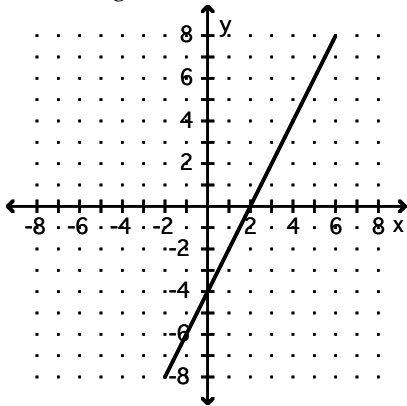


5) $h(x) = -2x + 4$

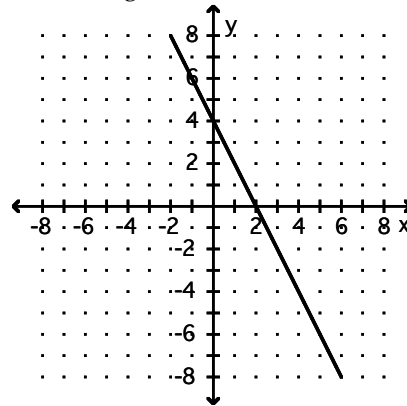
5) _____



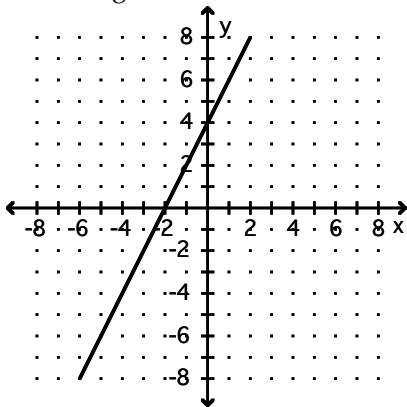
A) increasing



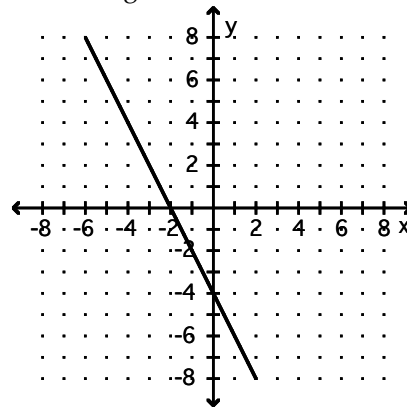
B) decreasing



C) increasing

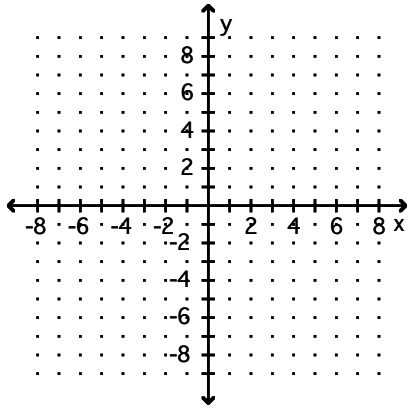


D) decreasing



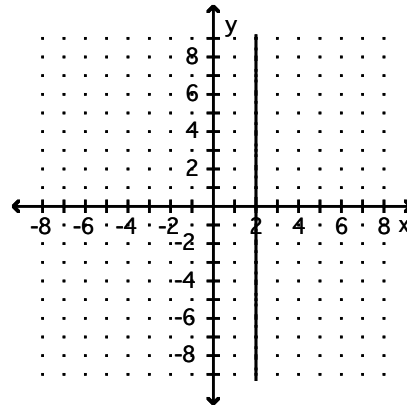
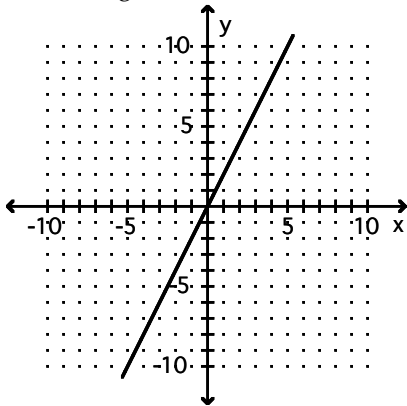
6) $F(x) = 2$

6) _____



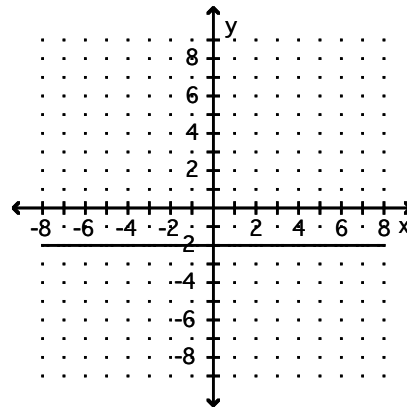
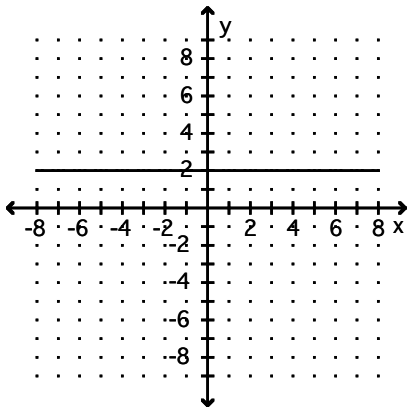
A) decreasing

B) constant



C) constant

D) constant



Use the given conditions to write an equation for the line in slope-intercept form.

7) Slope = -4, passing through (-2, 5)

A) $y - 5 = -4x + 2$

B) $y = -4x - 3$

C) $y - 5 = x + 2$

D) $y = -4x + 3$

7) _____

8) Passing through (2, -7) and (3, -4)

A) $y = 3x - 13$

C) $y = mx - 13$

B) $y + 7 = 3(x - 2)$

D) $y = -3x - 13$

8) _____

Answer Key

Testname: LINEAR FUNCTIONS

- 1) A
- 2) A
- 3) C
- 4) B
- 5) B
- 6) C
- 7) B
- 8) A