Name: _____ Date: _____

Interpreting Slope and Intercepts in Context – Medium

Tell what the slope and the y-intercept mean in each situation.

1. A taxi ride costs C = 3.75d + 5.50 dollars for d miles.
2. A plant's height is h = 3w + 12 centimeters after w weeks.
3. A phone's battery is at B = 80 - 20t percent after t hours of use.
4. A candle is H = 39 - 3t centimeters tall after burning for t hours.
5. A gift card has G = 20 - 5n dollars left after n coffees.
6. A gift card has G = 40 - 4n dollars left after n coffees.

Find the intercept described and tell what it means.

7. A candle is H = 30 - 2t centimeters tall after burning for t hours. Find the y-intercept.
8. A phone's battery is at B = 100 - 25t percent after t hours of use. Find the horizontal intercept.
9. A gift card has G = 20 - 4n dollars left after n coffees. Find the horizontal intercept.
10. A phone's battery is at B = 100 - 5t percent after t hours of use. Find the y-intercept.

Name: _____ Date: _____

Fresh Math

Interpreting Slope and Intercepts in Context - Medium

Find the intercept described and tell what it means.

11. A gift card has G = 100 - 4n dollars left after n coffees. Find the y-intercept.

12. A gift card has G = 100 - 5n dollars left after n coffees. Find the horizontal intercept.

A trend line for the data is given. Tell what the slope and y-intercept mean, then make the prediction.

13. Data on age of a car in years (x) and its value in thousands of dollars (y): trend line y = -2x + 31. Predict y when x = 6.

14. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -2x + 146. Predict y when x = 33.

15. Data on minutes of exercise (x) and calories burned (y): trend line y = 7x + 19. Predict y when x = 2.

16. Data on minutes of exercise (x) and calories burned (y): trend line y = 7x + 1. Predict y when x = 9.

17. Data on age of a car in years (x) and its value in thousands of dollars (y): trend line y = -3x + 28. Predict y when x = 9.

18. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -2x + 159. Predict y when x = 28.

19. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -3x + 139. Predict y when x = 45.

20. Data on minutes of exercise (x) and calories burned (y): trend line y = 6x + 6. Predict y when x = 2.

Interpreting Slope and Intercepts in Context – Medium – Answer Key

1. A taxi ride costs $C = 3.75d + 5.50$ dollars for d miles.

   Slope: $3.75 for each mile. y-intercept: a charge of $5.50 before the ride starts.

2. A plant's height is $h = 3w + 12$ centimeters after w weeks.

   Slope: it grows 3 cm each week. y-intercept: it was 12 cm tall when the measurements began.

3. A phone's battery is at $B = 80 - 20t$ percent after t hours of use.

   Slope: it loses 20% each hour. y-intercept: it was at 80% when use began.

4. A candle is $H = 39 - 3t$ centimeters tall after burning for t hours.

   Slope: it burns down 3 cm each hour. y-intercept: it was 39 cm tall before it was lit.

5. A gift card has $G = 20 - 5n$ dollars left after n coffees.

   Slope: each coffee costs $5. y-intercept: the card started with $20.

6. A gift card has $G = 40 - 4n$ dollars left after n coffees.

   Slope: each coffee costs $4. y-intercept: the card started with $40.

7. A candle is $H = 30 - 2t$ centimeters tall after burning for t hours. Find the y-intercept.

   30: it was 30 cm tall before it was lit

8. A phone's battery is at $B = 100 - 25t$ percent after t hours of use. Find the horizontal intercept.

   4 hours: after 4 hours, the battery is dead

9. A gift card has $G = 20 - 4n$ dollars left after n coffees. Find the horizontal intercept.

   5 coffees: after 5 coffees, the card is used up

10. A phone's battery is at $B = 100 - 5t$ percent after t hours of use. Find the y-intercept.

    100: it was at 100% when use began

Interpreting Slope and Intercepts in Context – Medium – Answer Key

11. A gift card has G = 100 - 4n dollars left after n coffees. Find the y-intercept.

    100: the card started with $100

12. A gift card has G = 100 - 5n dollars left after n coffees. Find the horizontal intercept.

    20 coffees: after 20 coffees, the card is used up

13. Data on age of a car in years (x) and its value in thousands of dollars (y): trend line y = -2x + 31. Predict y when x = 6.

    Slope: 2 thousand dollars of value lost each year. y-intercept: a value of 31 thousand dollars when new. Prediction: 19

14. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -2x + 146. Predict y when x = 33.

    Slope: 2 fewer cups sold for each degree warmer. y-intercept: 146 cups sold at 0°F. Prediction: 80

15. Data on minutes of exercise (x) and calories burned (y): trend line y = 7x + 19. Predict y when x = 2.

    Slope: 7 calories burned per minute. y-intercept: 19 calories burned with no exercise. Prediction: 33

16. Data on minutes of exercise (x) and calories burned (y): trend line y = 7x + 1. Predict y when x = 9.

    Slope: 7 calories burned per minute. y-intercept: 1 calories burned with no exercise. Prediction: 64

17. Data on age of a car in years (x) and its value in thousands of dollars (y): trend line y = -3x + 28. Predict y when x = 9.

    Slope: 3 thousand dollars of value lost each year. y-intercept: a value of 28 thousand dollars when new. Prediction: 1

18. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -2x + 159. Predict y when x = 28.

    Slope: 2 fewer cups sold for each degree warmer. y-intercept: 159 cups sold at 0°F. Prediction: 103

19. Data on outside temperature in °F (x) and cups of hot cocoa sold (y): trend line y = -3x + 139. Predict y when x = 45.

    Slope: 3 fewer cups sold for each degree warmer. y-intercept: 139 cups sold at 0°F. Prediction: 4

20. Data on minutes of exercise (x) and calories burned (y): trend line y = 6x + 6. Predict y when x = 2.

    Slope: 6 calories burned per minute. y-intercept: 6 calories burned with no exercise. Prediction: 18