Name: _____ Class: _____

1. Timothy's earnings vary directly with the number of hours he works. He worked 40 hours and earned $660.00. Which equation represents the relationship between the number of hours Timothy works, *x*, and his earnings, *y*?

A $y = 11.50x$ **B** $y = 16.50x$ **C** $y = 40x$ **D** $y = 66x$

2. Abbot is paid weekly for every hour he works. He worked 6 hours each day for 5 days last week. He earned $408, before taxes. Which equation represents Abbot's total pay, *p*, if he works *h* hours each week?

A $h = 13.60p$ **B** $h = 14.40p$ **C** $p = 13.60h$ **D** $p = 14.40h$

3. Michael's car can travel 25 miles on one gallon of gas. The cost of gas is $3.75 per gallon. Which equation would calculate the total cost of gas, *t*, based on the number of miles traveled, *n*?

A $t = 0.11n$ **B** $t = 0.15n$ **C** $t = 1.50n$ **D** $t = 6.67n$

4. On a map of North Carolina, 27 centimeters represents 18 miles. Based on the map, which equation would calculate the number of miles between two cities, y, when they measure x centimeters apart?

A $y = \frac{2}{3}x$ **B** $y = \frac{3}{2}x$ **C** $y = 9x$ **D** $y = 18x$

5. Joe's phone plan charges a flat rate per minute for a long distance call. The cost for a 24-minute call is $1.68, and a 45-minute call costs $3.15. If *t* represents the total cost of the call, which equation represents the cost of a phone call *n* minutes in length?

A $t = n + 1.68$ **B** $t = 1.68n$ **C** $t = n + 0.07$ **D** $t = 0.07n$

6. An mp3 player can store 250 songs for each 1 gigabyte of memory. If this proportional relationship remains constant, which equation can be used to determine how many songs, *s*, can be stored on an mp3 player with *g* gigabytes of memory?

A $250 + g = s$ **B** $250 - g = s$ **C** $250 \times g = s$ **D** $250 \div g = s$

7. Michael paid $35.26 for 10.25 gallons of gasoline. Which equation will calculate the cost, *y*, for *x* gallons of gasoline?

A $x = 3.44y$ **B** $y = 3.44x$ **C** $x = 3.53y$ **D** $y = 3.53x$

8. Karen is raising money for a trip by selling oranges for $0.50 each. Which equation represents the total amount of money Karen will raise, *t*, by selling *c* oranges?

A $t = c + 0.50$ **B** $c = t + 0.50$ **C** $t = 0.50c$ **D** $c = 0.50t$

9. John paid $80 for 5 tickets at an amusement park. Each of the tickets cost the same price. Which equation represents the cost, C, for *n* tickets?

A $C = 0.625n$ **B** $C = 5n$ **C** $C = 16n$ **D** $C = 80n$

10. The value of *y* is proportional to *x*. When $x = 3$, then $y = 15$. Which equation represents the relationship between *x* and *y*?

A $y = 0.2x$ **B** $y = 5x$ **C** $y = 12x$ **D** $y = 45x$

11. Arlene set up tables for a dinner. She put 6 chairs at each table. If *t* represents the number of tables Arlene set up, which equation could be used to find *c*, the number of chairs Arlene used?

A $c = 6t$ **B** $t = 6c$ **C** $c = t + 6$ **D** $t = c + 6$

12. The variables *x* and *y* vary directly. When $x = 12$, $y = 4$. Which of the following equations represents this relationship?

A $y = \frac{1}{3}x$ **B** $y = 3x$ **C** $y = \frac{48}{x}$ **D** $y = x - 8$

13. A grocery store sells 3 pounds of grapes for $3.45. Another grocery store sells 5 pounds of grapes for $5.75. Which equation represents the price of grapes, *p*, for *n* number of pounds at either store?

A $p = 5.75n$ **B** $p = 3.45n$ **C** $p = 2.00n$ **D** $p = 1.15n$