Name _____

Writing Equations and Interpreting Solutions

1. At Bob's Burgers it costs $3 for a burger and $2 for a side of fries. The Miller family spent a total of $22. The equation $3x + 2y = 22$ can be used to represent the situation. (4, 5) is a solution to this equation. What does this solution represent?

2. A flower is 7 cm tall. It grows an average of 0.2 cm per day. Write an equation to represent the height of the flower, h, after d days.

3. Helga has already picked 120 strawberries. She is able to pick about 45 strawberries each day. Write and solve an equation to find the number of days until Helga has 390 strawberries.

4. A landscaper made a profit of $356 per day. He charged $45 per hour, x, and paid $3.50 for each gallon, y, of gasoline he used. The equation $356 = 45x - 3.5y$ represents the situation. What does the ordered pair (9, 14) mean as a solution to the equation?

5. A trucker traveled 500 miles in h hours. If the trucker averaged 60 mph, which linear equation could be used to find the number of hours that the trucker drove?
   A. $500 = 60 + h$
   B. $500 = 60 - h$
   C. $500 = 60h$
   D. $500 = \frac{60}{h}$

6. Barret had x dollars to open a savings account. The savings account earned 3% simple interest per year. He did not make any deposits or withdrawals until a few years later when he withdrew $50. Which equation represents how much money was in the savings account right after he made the withdrawal?
   A. $A = 3x - 50$
   B. $A = 0.03x - 50$
   C. $A = x + 3x - 50$
   D. $A = 1.03x - 50$

7. A store sold $320 of raspberries and blueberries. It sold x pints of raspberries and y pints of blueberries. The store charged $3 per pint for raspberries and $4 per pint of blueberries. Which equation represents the relationship between the pints of raspberries, pints of blueberries, and the total amount of money?
   A. $3x + 4y = 320$
   B. $4x + 3y = 320$
   C. $7(x + y) = 320$
   D. $3x(4y) = 320$

8. The equation $F = \frac{9}{5}C + 32$ converts Celsius temperatures to Fahrenheit temperatures. What does the solution $(100, 212)$ represent?
   A. A temperature of 100°C is equivalent to 212°F.
   B. A temperature of 212°C is equivalent to 100°F.
   C. A temperature of 100°C is 212 degrees higher than 100°F.
   D. A temperature of 212°C is 100 degrees higher than 212°C.

Writing Equations and Interpreting Solutions Answers

1. At Bob's Burgers it costs $3 for a burger and $2 for a side of fries. The Miller family spent a total of $22. The equation $3x + 2y = 22$ can be used to represent the situation. (4, 5) is a solution to this equation. What does this solution represent?

   They could buy 4 burgers and 5 sides of fries to spend the total of $22.

2. A flower is 7 cm tall. It grows an average of 0.2 cm per day. Write an equation to represent the height of the flower, h, after d days.

   $h = 0.2d + 7$

3. Helga has already picked 120 strawberries. She is able to pick about 45 strawberries each day. Write and solve an equation to find the number of days until Helga has 390 strawberries.

   $390 = 45d + 120$

   $6\ days$

4. A landscaper made a profit of $356 per day. He charged $45 per hour, x, and paid $3.50 for each gallon, y, of gasoline he used. The equation $356 = 45x - 3.5y$ represents the situation. What does the ordered pair (9, 14) mean as a solution to the equation?

   He could work 9 hours and use 14 gallons of gasoline to make a profit of $356.

5. A trucker traveled 500 miles in h hours. If the trucker averaged 60 mph, which linear equation could be used to find the number of hours that the trucker drove?
   A. $500 = 60 + h$
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6. Barret had x dollars to open a savings account. The savings account earned 3% simple interest per year. He did not make any deposits or withdrawals until a few years later when he withdrew $50. Which equation represents how much money was in the savings account right after he made the withdrawal?
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