

10-Writing Equations from Story Problems

Write the function rule in slope-intercept form.

1. $b = 4$
 $m = 0$

2. Rate of change = -2
Initial value = 4

3. Slope = -5
y-intercept = 0

4. Ethan's bank account is modeled by the function rule $y = 75x + 100$, where x is the time in months and y is the amount in the account. What do the slope and y-intercept tell us about Ethan's bank account? _____

5. Lydia has a lemonade stand. Her profits are modeled by the function $y = 5x - 20$, where y is the amount of money she's made and x is the time in days. What do the slope and y-intercept tell us about Lydia's profits? _____

<i>Story</i>	<i>Rate of Change (m)</i>	<i>Initial Value (b)</i>	<i>Function Rule</i>
Darby opened a bank account with \$1000. Each month, she makes \$650 and spends \$400. Write a rule to describe the amount in her account after x months.	6. _____	7. _____	8. _____
Cooper has 20 postcards in his collection. Each time he goes on vacation he buys 8 postcards to add to the collection. Write a rule to describe the number of postcards in the collection after x vacations.	9. _____	10. _____	11. _____
Isabelle has a babysitting job. She earns \$48 for an 8-hour day. Write a rule to describe how much she makes after x hours.	12. _____	13. _____	14. _____
Benson can cycle 24 miles in 2 hours. Write a rule to describe how many miles he can cycle in x hours.	15. _____	16. _____	17. _____
Juno and Jade own a hot dog stand. They spent \$75 on supplies for their stand. Each day, they make \$15 on their hot dog sales. Write a rule to describe their profit after x days.	18. _____	19. _____	20. _____
A 10-inch candle began burning at time 0 hours. After two hours, the candle was 8 inches tall. Write a rule to describe the candle's height after x hours.	21. _____	22. _____	23. _____