Task card 1 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 3 months it is 119, and after 6 months it is 167. What is the rate of change per month?

Task card 2 Rate of Change & Initial Value

The water left in liters changes at a constant rate. After 1 minute it is 582, and after 5 minutes it is 510. What is the initial value (when x = 0)?

Task card 3 Rate of Change & Initial Value

A tank holds 599 liters of water and drains 27 liters every minute. Write an equation for y, the water left in liters, after x minutes.

Task card 4 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 1 mile it is 9, and after 4 miles it is 24. Write an equation for y, the fare in dollars, after x miles.

Task card 5 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 1 hour it is 94, and after 5 hours it is 82. What is the rate of change per hour?

Task card 6 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 2 miles it is 15, and after 4 miles it is 23. What is the initial value (when x = 0)?

Task card 7 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 4 hours it is 256, and after 7 hours it is 358. What is the rate of change per hour?

Task card 8 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 4 miles it is 21, and after 8 miles it is 37. What is the initial value (when x = 0)?

Task card 9 Rate of Change & Initial Value

A phone battery is at 93% and loses 7% every hour. Write an equation for y, the battery level in percent, after x hours.

Task card 10 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 4 hours it is 57, and after 7 hours it is 27. Write an equation for y, the battery level in percent, after x hours.

Task card 11 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 3 hours it is 24, and after 7 hours it is 8. What is the rate of change per hour?

Task card 12 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 2 weeks it is 98, and after 5 weeks it is 161. What is the initial value (when x = 0)?

Task card 13 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 4 hours it is 27, and after 6 hours it is 23. What is the rate of change per hour?

Task card 14 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 2 hours it is 23, and after 6 hours it is 11. What is the initial value (when x = 0)?

Task card 15 Rate of Change & Initial Value

Sam has $26 saved and adds $25 every week. Write an equation for y, the amount he has saved in dollars, after x weeks.

Task card 16 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 1 mile it is 8, and after 4 miles it is 20. Write an equation for y, the fare in dollars, after x miles.

Task card 17 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 4 weeks it is 155, and after 6 weeks it is 193. What is the rate of change per week?

Task card 18 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 3 miles it is 14, and after 7 miles it is 22. What is the initial value (when x = 0)?

Task card 19 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 3 months it is 120, and after 6 months it is 186. What is the rate of change per month?

Task card 20 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 1 hour it is 36, and after 4 hours it is 33. What is the initial value (when x = 0)?

Task card 21 Rate of Change & Initial Value

A gym charges a $54 sign-up fee plus $23 per month. Write an equation for y, the total cost in dollars, after x months.

Task card 22 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 1 hour it is 125, and after 4 hours it is 218. Write an equation for y, the charge in dollars, after x hours.

Task card 23 Rate of Change & Initial Value

The water left in liters changes at a constant rate. After 2 minutes it is 480, and after 5 minutes it is 459. What is the rate of change per minute?

Task card 24 Rate of Change & Initial Value

The water left in liters changes at a constant rate. After 4 minutes it is 181, and after 7 minutes it is 91. What is the initial value (when x = 0)?

Rate of Change & Initial Value Task Cards

Recording sheet · Grade 8 · Answer each question. A rate of change is negative when the quantity decreases. Give numbers only, without units.

Name: _____ Date: _____

Scan to check your answers

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Rate of Change & Initial Value Task Cards: Answer Key

Grade 8 · Hard

The answers online

1. 16	**2.** 600	**3.** y = -27x + 599
4. y = 5x + 4	**5.** -3	**6.** 7
7. 34	**8.** 5	**9.** y = -7x + 93
10. y = -10x + 97	**11.** -4	**12.** 56
13. -2	**14.** 29	**15.** y = 25x + 26
16. y = 4x + 4	**17.** 19	**18.** 8
19. 22	**20.** 37	**21.** y = 23x + 54
22. y = 31x + 94	**23.** -7	**24.** 301