Task card 1 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 4 hours it is 19, and after 8 hours it is 7. What is the rate of change per hour?

Task card 2 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 3 miles it is 18, and after 6 miles it is 33. What is the initial value (when x = 0)?

Task card 3 Rate of Change & Initial Value

A taxi ride costs $3 plus $2 per mile. Write an equation for y, the fare in dollars, after x miles.

Task card 4 Rate of Change & Initial Value

The water left in liters changes at a constant rate. After 4 minutes it is 269, and after 7 minutes it is 242. What is the rate of change per minute?

Task card 5 Rate of Change & Initial Value

The water left in liters changes at a constant rate. After 4 minutes it is 252, and after 7 minutes it is 162. What is the initial value (when x = 0)?

Task card 6 Rate of Change & Initial Value

A phone battery is at 93% and loses 8% every hour. Write an equation for y, the battery level in percent, after x hours.

Task card 7 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 4 hours it is 263, and after 7 hours it is 401. What is the rate of change per hour?

Task card 8 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 4 hours it is 305, and after 6 hours it is 415. What is the initial value (when x = 0)?

Task card 9 Rate of Change & Initial Value

A taxi ride costs $4 plus $4 per mile. Write an equation for y, the fare in dollars, after x miles.

Task card 10 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 4 weeks it is 86, and after 6 weeks it is 96. Write an equation for y, the amount he has saved in dollars, after x weeks.

Task card 11 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 4 weeks it is 186, and after 7 weeks it is 219. What is the rate of change per week?

Task card 12 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 4 miles it is 23, and after 8 miles it is 39. What is the initial value (when x = 0)?

Task card 13 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 1 month it is 66, and after 4 months it is 123. What is the rate of change per month?

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 37, and after 6 hours it is 33. What is the initial value (when x = 0)?

Task card 15 Rate of Change & Initial Value

A taxi ride costs $9 plus $3 per mile. Write an equation for y, the fare in dollars, after x miles.

Task card 16 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 1 month it is 63, and after 4 months it is 117. Write an equation for y, the total cost in dollars, after x months.

Task card 17 Rate of Change & Initial Value

The fare in dollars changes at a constant rate. After 3 miles it is 21, and after 7 miles it is 41. What is the rate of change per mile?

Task card 18 Rate of Change & Initial Value

The height of the candle in cm changes at a constant rate. After 4 hours it is 20, and after 8 hours it is 4. What is the initial value (when x = 0)?

Task card 19 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 2 hours it is 227, and after 6 hours it is 475. What is the rate of change per hour?

Task card 20 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 21. What is the initial value (when x = 0)?

Task card 21 Rate of Change & Initial Value

A taxi ride costs $8 plus $2 per mile. Write an equation for y, the fare in dollars, after x miles.

Task card 22 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 1 hour it is 91, and after 4 hours it is 67. What is the rate of change per hour?

Task card 23 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 1 week it is 44, and after 4 weeks it is 95. What is the initial value (when x = 0)?

Task card 24 Rate of Change & Initial Value

A candle is 24 cm tall and burns down 2 cm every hour. Write an equation for y, the height of the candle in cm, after x hours.

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 · Medium

The answers online

1. -3	**2.** 3	**3.** y = 2x + 3
4. -9	**5.** 372	**6.** y = -8x + 93
7. 46	**8.** 85	**9.** y = 4x + 4
10. y = 5x + 66	**11.** 11	**12.** 7
13. 19	**14.** 39	**15.** y = 3x + 9
16. y = 18x + 45	**17.** 5	**18.** 36
19. 62	**20.** 9	**21.** y = 2x + 8
22. -8	**23.** 27	**24.** y = -2x + 24