Task card 1 Rate of Change & Initial Value

Sam has $68 saved and adds $9 every week. What is the rate of change of the amount he has saved in dollars per week?

Task card 2 Rate of Change & Initial Value

A phone battery is at 93% and loses 10% every hour. What is the battery level in percent after 4 hours?

Task card 3 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 2 months it is 93, and after 6 months it is 177. What is the rate of change per month?

Task card 4 Rate of Change & Initial Value

A tank holds 318 liters of water and drains 15 liters every minute. What is the initial value of the water left in liters?

Task card 5 Rate of Change & Initial Value

A candle is 30 cm tall and burns down 2 cm every hour. What is the rate of change of the height of the candle in cm per hour?

Task card 6 Rate of Change & Initial Value

A plumber charges $98 for a visit plus $74 per hour. What is the charge in dollars after 2 hours?

Task card 7 Rate of Change & Initial Value

The total cost in dollars changes at a constant rate. After 1 month it is 126, and after 4 months it is 243. What is the rate of change per month?

Task card 8 Rate of Change & Initial Value

Sam has $149 saved and adds $8 every week. What is the initial value of the amount he has saved in dollars?

Task card 9 Rate of Change & Initial Value

A taxi ride costs $3 plus $4 per mile. What is the rate of change of the fare in dollars per mile?

Task card 10 Rate of Change & Initial Value

A taxi ride costs $3 plus $2 per mile. What is the fare in dollars after 6 miles?

Task card 11 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 7 hours it is 24. What is the rate of change per hour?

Task card 12 Rate of Change & Initial Value

A candle is 37 cm tall and burns down 2 cm every hour. What is the initial value of the height of the candle in cm?

Task card 13 Rate of Change & Initial Value

A gym charges a $61 sign-up fee plus $41 per month. What is the rate of change of the total cost in dollars per month?

Task card 14 Rate of Change & Initial Value

A candle is 32 cm tall and burns down 2 cm every hour. What is the height of the candle in cm after 5 hours?

Task card 15 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 1 hour it is 85, and after 3 hours it is 73. What is the rate of change per hour?

Task card 16 Rate of Change & Initial Value

A candle is 35 cm tall and burns down 2 cm every hour. What is the initial value of the height of the candle in cm?

Task card 17 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 4 hours it is 61, and after 8 hours it is 29. What is the rate of change per hour?

Task card 18 Rate of Change & Initial Value

The battery level in percent changes at a constant rate. After 4 hours it is 62, and after 7 hours it is 41. What is the initial value (when x = 0)?

Task card 19 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 20 Rate of Change & Initial Value

The amount he has saved in dollars changes at a constant rate. After 4 weeks it is 209, and after 8 weeks it is 285. What is the rate of change per week?

Task card 21 Rate of Change & Initial Value

The charge in dollars changes at a constant rate. After 4 hours it is 247, and after 8 hours it is 379. What is the initial value (when x = 0)?

Task card 22 Rate of Change & Initial Value

A tank holds 565 liters of water and drains 13 liters every minute. Write an equation for y, the water left in liters, after x minutes.

Task card 23 Rate of Change & Initial Value

A taxi ride costs $6 plus $4 per mile. What is the rate of change of the fare in dollars per mile?

Task card 24 Rate of Change & Initial Value

A phone battery is at 94% and loses 9% every hour. What is the battery level in percent after 5 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 · Easy

The answers online

1. 9	**2.** 53	**3.** 21
4. 318	**5.** -2	**6.** 246
7. 39	**8.** 149	**9.** 4
10. 15	**11.** -1	**12.** 37
13. 41	**14.** 22	**15.** -6
16. 35	**17.** -8	**18.** 90
19. y = -8x + 93	**20.** 19	**21.** 115
22. y = -13x + 565	**23.** 4	**24.** 49