

Name: _____

Date: _____

Identify the starting value (b) and the rate (m), then build $y = mx + b$. Last two are challenge problems!

- 1.** A pool has 200 gal and fills at 15 gal/min. Write the equation.

show your work

- 2.** Same pool: how much water after 10 min?

show your work

- 3.** A tank holds 500 gal and drains 25 gal/min. Equation?

show your work

- 4.** Same tank: when is it empty?

show your work

5. Taxi: \$3 flag + \$2 per mile. Cost for 7 miles?

show your work

6. Savings: start \$40, add \$12 per week. When do you reach \$124?

show your work

7. Plant: 5 cm tall, grows 2 cm/week. Height after w weeks? After 8?

show your work

8. A phone loses 8% battery per hour from 100%. Equation and battery after 6 hr?

show your work

9. A candle: 9 in after 2 hr, 6 in after 4 hr. Find the rate, the start height, and the equation. ★ CHALLENGE

show your work

10. Bus A leaves with 45 riders, gains 3 per stop. Bus B leaves with 60, gains none. After which stop does A pass B? ★ CHALLENGE

show your work