

## HW 2-2

## Int 2

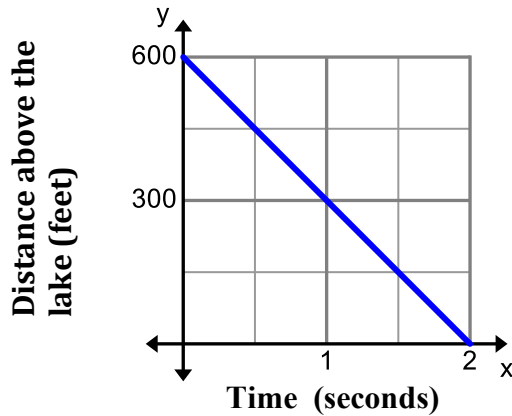
## Constant Rate of Change

## Unit 2

On each problem you need two answers.

- Find the rate of change for each situation (Answers must include units).
- Determine whether the relationship is proportional and explain your reasoning.

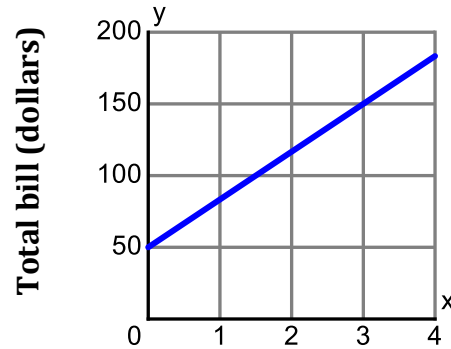
1. A Peregrine Falcon diving for a fish.



a.

b.

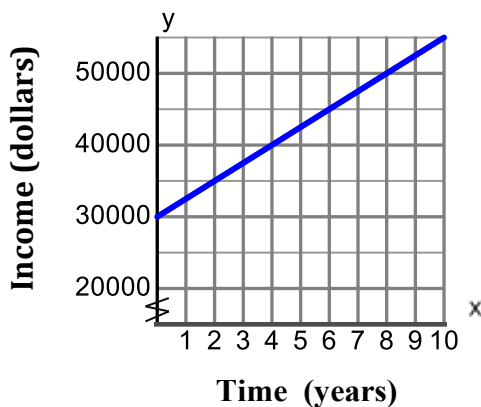
3. The amount you owe a plumber.



a.

b.

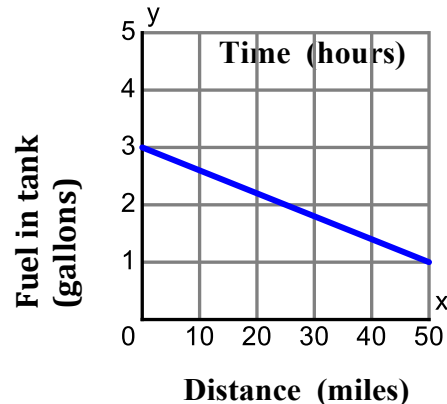
2. The income for a certain profession over time.



a.

b.

4. The amount of fuel remaining while traveling.



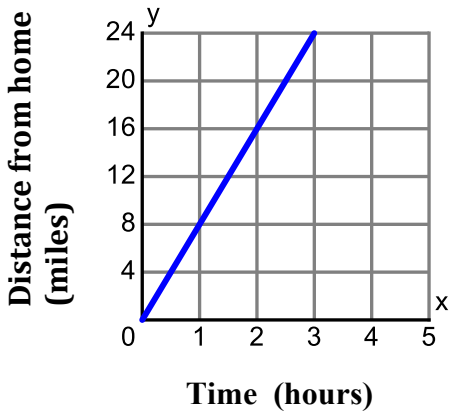
a.

b.

On each problem you need two answers.

- a. Find the rate of change for each situation (Answers must include units).
- b. Determine whether the relationship is proportional and explain your reasoning.

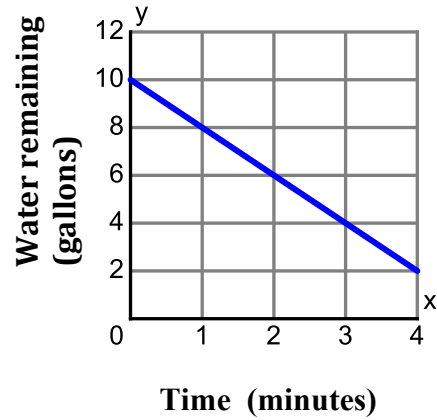
5. Your distance from home as you ride your bike.



a.

b.

6. A swimming pool draining.



a.

b.

7. Cost of using a computer at an Internet Café.

<b>Time (hours)</b>	2	4	6
<b>Cost (dollars)</b>	7	14	21

a.

b.

8. Cost of renting a movie.

<b>Time (days)</b>	<b>Total Cost (dollars)</b>
4	6.00
5	8.25
6	10.50
7	12.75

a.

b.

On each problem you need two answers.

- a. Find the rate of change for each situation (Answers must include units).
- b. Determine whether the relationship is proportional and explain your reasoning.

9. Amount of time at an amusement park and admission fee.

a.

<b>Time (hours)</b>	4	5	6
<b>Admission Fees (dollars)</b>	34.99	34.99	34.99

b.

10. Calories burned.

a.

<b>Time (minutes)</b>	40	60	80
<b>Calories burned</b>	500	750	1000

b.

11. Cost of text messages.

a.

<b>Number of Texts</b>	<b>Cost</b>
300	12.50
350	20.00
380	24.50
450	35.00
550	50.00

b.

12. After traveling for 4 hours, Michael was 280 miles from home. He had traveled 420 miles after 6 hours from the time he started traveling. What is his rate of change?

a.

b.

13. Josh started out with \$15.50. After working for 3 hours, he had \$32.00. How much did Josh receive per hour?

a.

b.

**On each problem you need two answers.**

- a. Find the rate of change for each situation (Answers must include units).**
- b. Determine whether the relationship is proportional and explain your reasoning.**

**14.** At noon, there was 3 inches of snow. At 2:00 pm, there was 9 inches of snow. What is the rate of snowfall?

**a.**

**b.**

**15.** Kevin lives 3 miles away from the trail head. Starting from the trail head, it takes him 2 hours to get to the lake which is 11 miles from his house. Find his rate of change.

**a.**

**b.**

**Find the slope.**

**16.**  $(-4, 7), (-10, -8)$

**Solve the equation or inequality.**

**18.**  $\frac{12-5x}{4} \geq 8$

**17.**  $(9, 16), (-3, 6)$

**19.**  $4(3x + 7) - 13 = 6(3 + 2x)$

