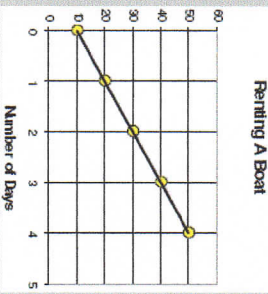


# PRACTICE QUESTIONS: Application Questions

Date Solutions

1. For each of the scenarios below fill in the appropriate values in the space provided.

Scenario	A banquet hall charges a flat rate of \$300 plus \$20 per person	Lindsay earns \$10 per hour	A cell phone data plan charges a flat fee of \$10 plus \$0.40 per MB		<table border="1" data-bbox="1094 1756 1279 2018"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>Time (s)</td> <td>Distance (m)</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> </tr> <tr> <td>4</td> <td>8</td> </tr> </tbody> </table>	x	y	Time (s)	Distance (m)	0	0	1	2	2	4	3	6	4	8
x	y																		
Time (s)	Distance (m)																		
0	0																		
1	2																		
2	4																		
3	6																		
4	8																		
Dependent variable	charges	earnings	charges	cost	Distance														
Independent Variable	people	hours	MB	Days	Time														
Initial Value (b)	300	0	\$10	\$10	0														
Rate (m)	\$20/person	\$10/hour	\$0.40/MB	\$20	2														
Equation	$y = 20x + 300$	$y = 10x$	$y = 0.40x + 10$	$y = 20x + 10$	$y = 2x$														
Partial or Direct	Partial	Direct	Partial	Partial	Direct														

2. A gym membership costs a one-time fee of \$99 plus \$23 per month.

a. Write an equation to model this situation (remember to define your variables!). Let C rep. cost. Let n rep. # months.

$$y = mx + b$$

b. How much would it cost to be a member for 2 years?

$$C = 23n + 99$$

(24 months)  
n = 24

$$= 23(24) + 99$$

$$= \$651$$

∴ it would cost \$651.