

$$\frac{\quad}{20+2} = \frac{\quad}{22}$$

Name Solutions

1. For each financial situation choose the scenario that would be better for the investor/borrower. [3]

i) Tavleen has \$5000 to invest. Should they choose:

- a) 5% simple interest? **b) 12% simple interest?**

ii) Spencer is borrowing \$20000 to buy a new car. Should they choose:

- a) 4.5% compounded monthly?** b) 7% compounded monthly?

iii) Ty has \$1000 to invest. Should they choose:

- a) ~~5%~~ simple interest? **b) 5% compounded monthly?**

2. The cost of renting a jet ski is \$50 plus \$30/hour. [3]

- a) The initial value is \$50 ✓
 b) The constant of variation is \$30/hr ✓
 c) Write an equation to model the rental cost, C, of renting for n hours $C = 30n + 50$

3. Determine an equation to model the linear growth shown in each of the following. [6]

a)

n	C
0	60
1	49
2	38
3	27
4	16

Handwritten notes: -11, -11, -11, -11

b)

X	Y
0	7
1	12
2	17
3	22
4	27
5	32

Handwritten notes: -5, +5, +5, +5, +5

initial value: 60 ✓
 constant of variation: -11 ✓
 equation: $C = -11n + 60$ ✓

initial value: 7 ✓
 constant of variation: 5 ✓
 equation: $y = 5x + 7$ ✓

12

4. Groovy Rentals charges a flat fee of \$300 plus \$55/day to rent a car.
ABC Rentals charges \$80/day to rent a car.

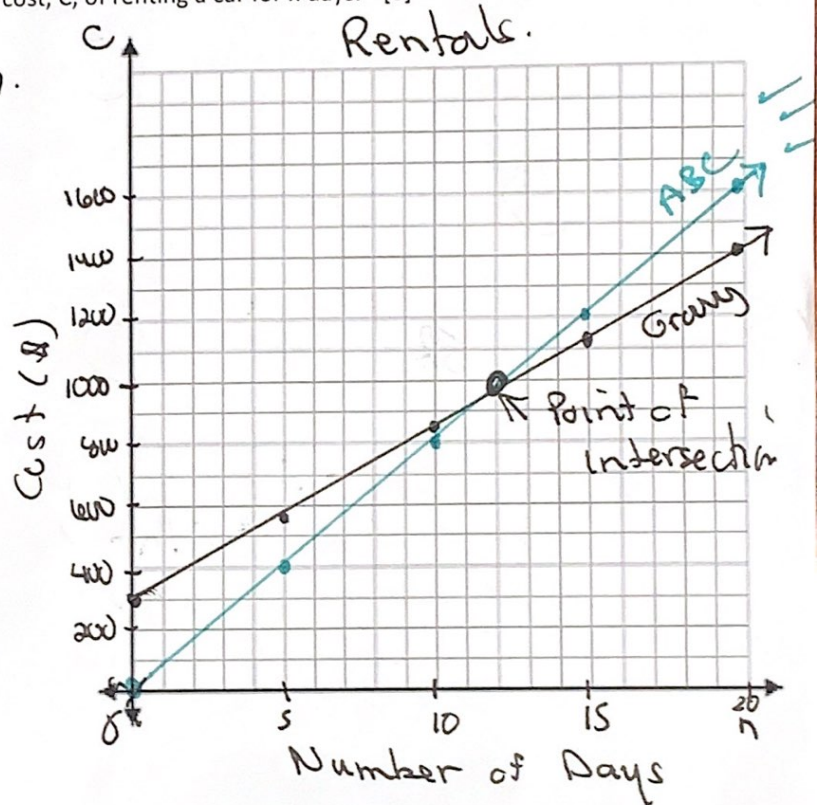
a) Create a table of values and graph the total cost, C , of renting a car for n days. [8]

Groovy
 $C = 55n + 300$

n	C
0	300
5	575
10	850
15	1125
20	1400

ABC
 $C = 80n$

n	C
0	0
5	400
10	800
15	1200
20	1600



- b) What is the solution to the system? What does the solution represent in the context of the question?

$(12, 960)$ At 12 days both rentals
will be \$960

- c) When should you rent from Groovy Rentals?

You should rent from Groovy
rentals if renting over 12 days.