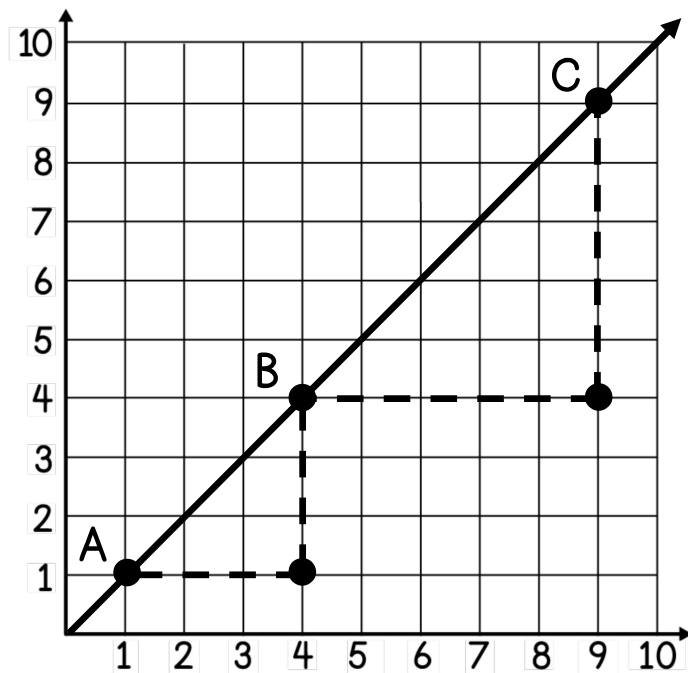# SLOPE AND RATE OF CHANGE

Each of the 10 cards will have statements from two students. Read carefully and choose the name of the student who made the correct statement. Then justify your answer in the space provided.

1. _____ is correct because...

2. _____ is correct because...

3. _____ is correct because...

4. _____ is correct because...

5. _____ is correct because...

6. _____ is correct because...

7. _____ is correct because...

8. _____ is correct because...

9. _____ is correct because...
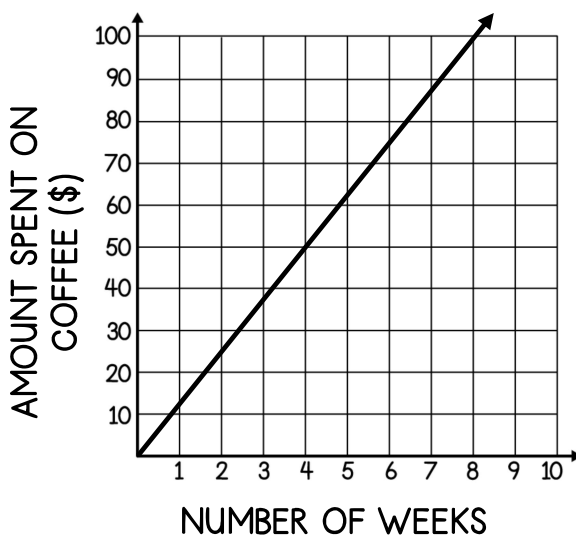
10. _____ is correct because...

## CARD #1:



Kimani says that the slope of the line between points B and C is greater than the slope of the line between points A and B.

Kiara says that the slope of the line between points B and C is the same as the slope of the line between points A and B.

## CARD #2:

Janie's goal is to spend no more than $13 each week on coffee. The graph shows the amount she has spent on coffee over the last several weeks.



NUMBER OF WEEKS

Louis says that Janie has not met her goal.

Lily says that Janie has met her goal.

## CARD #3:

A graphed line passes through the points (8, 6) and (-8, 4).

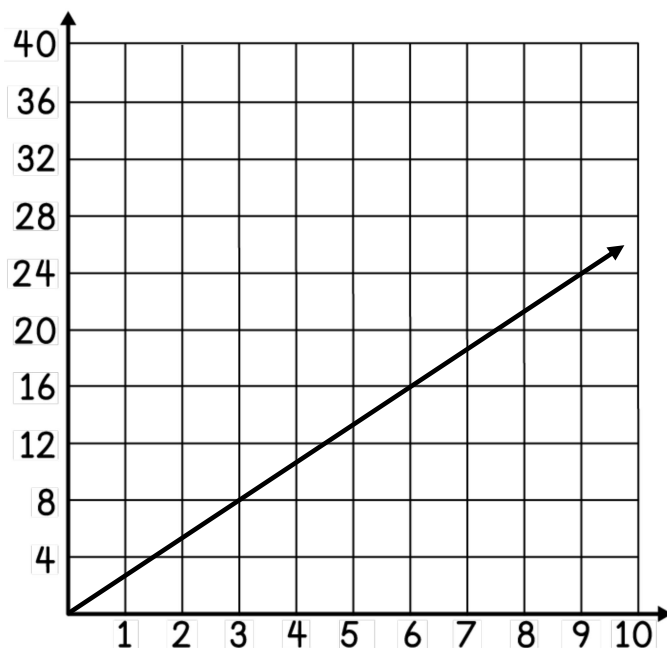Mason says the slope can be found by calculating the following:

$$\frac{6-4}{8-(-8)}$$

Monica says the slope can be found by calculating the following:

$$\frac{8-(-8)}{6-4}$$

## CARD #4:



Nolan says the rate of change shown on the graph is $\frac{2}{3}$.

Nadia says the rate of change shown on the graph is $\frac{8}{3}$.

## CARD #5:

Sweet Treats sells candy by the pound as shown in the table.

| AMOUNT (LBS) | COST |
|:---:|:---:|
| 3 | $11.97 |
| 5 | $19.95 |
| 7 | $27.93 |
| 9 | $35.91 |

Oscar says the unit rate is $3.99 per pound of candy.

Olivia says the unit rate is $7.98 per pound of candy.

## CARD #6:

A graphed line passes through the points (12, 5) and (12, 9).

Paul says the slope of the line is zero.

Phoebe says the slope of the line is undefined.

## CARD #7:

A local DJ charges customers a set-up fee plus an hourly rate. For a 3-hour event, the DJ charges $275. For a 5-hour event, the DJ charges $425.

Raymond says the DJ charges $75 an hour.

Rosie says the DJ charges $92 an hour.

## CARD #8:

At Fromazing, frozen yogurt costs $0.50 per ounce. The cost of frozen yogurt per ounce at Frotastic is shown below.

| AMOUNT (OZ) | COST |
| --- | --- |
| 5 | $2.40 |
| 8 | $3.84 |
| 11 | $5.28 |
| 14 | $6.72 |

Silas says Frotastic is a better deal.

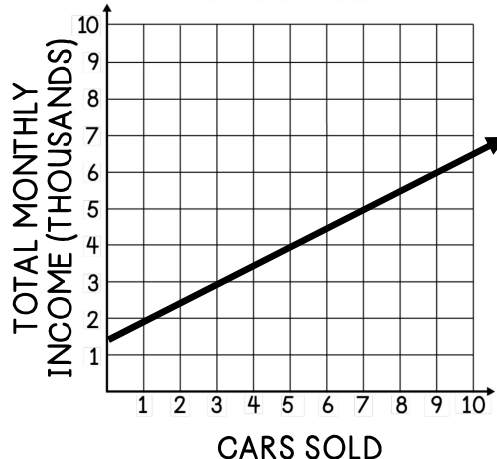Sterling says Fromazing is a better deal.

# CARD #9:

Two car dealerships pay their employees a monthly salary plus a commission on cars that they sell.

DEALERSHIP A:

| CARS SOLD | MONTHLY INCOME |
|-----------|----------------|
| 1 | $1,900 |
| 4 | $3,850 |
| 7 | $5,800 |
| 10 | $7,750 |

DEALERSHIP B:



Total Monthly Income (Thousands) vs Cars Sold

Tyson says that Dealership A pays a higher commission on cars sold.

Tyra says that Dealership B pays a higher commission on cars sold.

# CARD #10:

Two friends are saving money to take a vacation over Spring Break. Jim's account can be represented by y = 250 + 120x where x is the number of weeks and y is the total amount in his savings account. Josh's savings account balance is shown in the table below:

| NUMBER OF WEEKS | TOTAL AMOUNT IN SAVINGS |
|-----------------|-------------------------|
| 2 | $520 |
| 4 | $740 |
| 6 | $960 |
| 8 | $1,180 |

Vince says that Josh is saving money at a greater rate.

Vivian says that Jim is saving money at a greater rate.