Assignment Self-Monitoring Sheet

Welcome 9th Grade!	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: 9/11 Topic: No Homework	0 1 2	I read more about Dr. Okikiolu
Tuesday Date: 9/12 Topic: Gradient Practice	0 1 2	
Wednesday Date: 9/13 Topic: Equations of a line and Graphing	0 1 2	
Thursday Date: 9/14 Topic: Equations of a line and Graphing	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

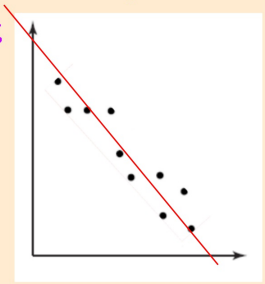
Advisory Schedule!:

1st Hour	8:05 – 8:48
2nd Hour	8:53 – 9:36
Advisory	9:41 – 10:23
3rd Hour	10:28 – 11:11
4th Hour	11:16 – 11:59
5th Hour	12:04 – 1:24
Lunch A	12:04 – 12:34
Class A	12:39 – 1:24
Class B	12:04 – 12:49
Lunch B	12:54 – 1:24
6th Hour	1:29 – 2:12
7th Hour	2:17 – 3:00

Warm-up:

Draw a line to fit the scatter plot.

- Middle of the points
- Straight Line
- Follow the slope



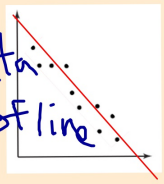
What are the characteristics of a line of best fit?

Class Plan:

1. Warm-up
2. Line of Best Fit
3. U.S. Movie Ticket Analysis

Line of Best Fit

What are the characteristics of a line of best fit?



* Goes through most data
* "Equal" on both sides of line
* Straight lines

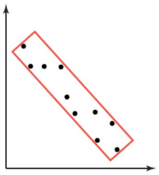
Line is in the direction of data

Then share with whole group :)

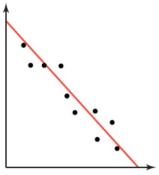
Line of Best Fit

Finding a Line of Fit

1. Determine the direction of the points. The longer side of the smallest rectangle that contains most of the points shows the general direction of the line.

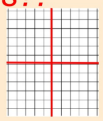


2. The line should divide the points equally. Draw the line so that there are about as many points above the line as below the line. The points above the line should not be concentrated at one end, and neither should the points below the line. The line has nearly the same slope as the longer sides of the rectangle.



U.S. Movie Ticket Analysis

*Choose atleast 6 pts. *Why these points?.*



*Plot points & label x/y axes

*Draw Line of Best Fit. *Why this line?*

*Solve for Gradient. *Interpret meaning*

*Define x/y & write an equation

*Does your equation represent your data well?

*Predict average price in 2025.

*Is your prediction realistic?

Check exemplar on teamisleqa...

U.S. Movie Ticket Analysis

(10 Minutes) Individual work

*Silently begin analysis

(20 minutes) Partner Work

*Compare & work with your neighbor

This is a practice Criterion D: Real Life Assessment. Complete for tomorrow. (Exemplar will be online)

1. Choose atleast 6 pts. & list as ordered pairs. *Explain reason for choosing these points.*

Reflect...

Should we use the entire year (ie 2010) as our x-values?

Will those values fit well on the axis? ... How else could we define the x-value?

1. Choose atleast 6 pts. & list as ordered pairs. *Explain reason for choosing these points.*

1. **Choose and list *at least* 6 points** from the data table.

Why did you choose these points?

Year	(after 1948)	Ticket Price ($)
1948	0	$0.36
1958	10	$0.68
1967	19	$1.22
1974	26	$1.89
1980	32	$2.69
1985	37	$3.55
1990	42	$4.22
1995	47	$4.35
2000	52	$5.39
2005	57	$6.41
2010	62	$7.89
2015	67	$8.43

1. Choose atleast 6 pts. & list as ordered pairs.
Explain reason for choosing these points.

ORDERED PAIRS

(48, .36)
(58, .68)
(67, 1.22)
(74, 1.89)
(80, 2.69)
(85, 3.55)
(90, 4.22)
(95, 4.35)
(100, 5.39)
(105, 6.41)
(2010, 7.89)

Define x-value as years after _____

Year	Ticket Price
1948	$0.36
1958	$0.68
1967	$1.22
1974	$1.89
1980	$2.69
1985	$3.55
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2. Plot points & label x/y axes
3. Draw Line of Best Fit.

Title

Price ($)

Years after 1948

2. Plot points & label x/y axes

3. Draw Line of Best Fit.

How did you choose this line?

2. **Plot the points** you chose in #1. Clearly **label** your axes.

3. Next, **estimate** a "line of best fit" for your data points and draw it on your graph.

   Definition of "line of best fit": a line on a graph showing the general direction that a group of points seem to be heading.

   Why is your line a good fit to your graph?

4. Solve for Gradient. *What does this tell you?*

4. **Find the gradient** (slope) of your line. *Choose two points* ***ON THE LINE*** and show work.

a) Interpret the meaning of the **gradient** by answering questions below:
What does your gradient represent in this situation?

What does it tell you about the data?

5-6.Define variables & write an equation

5. Define the x and y-values: **x:** _____ **y:** _____
6. Use two points and the gradient to write **an equation** for your line. Show work.

7. Does your equation represent your data well?

7. **Verify** your equation by choosing a point to substitute into your equation. Consider solving for year ***and*** ticket price.
   Chosen point: (,)

"How well does your equation represent your points?"

8. Estimate cost in 2025.

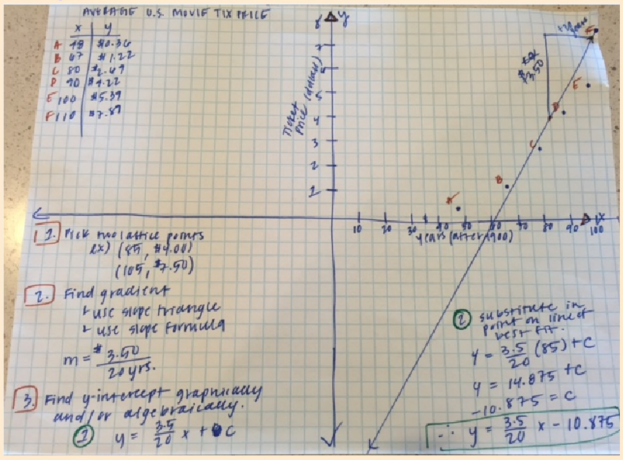
8. **Use your equation** to estimate the average U.S. movie ticket price in 2025. (x = 77)

8. Is your prediction realistic?

9. **Defend** whether this prediction is or is not realistic?

[1] http://www.natoonline.org/data/ticket-price/
[1] https://www.mathsisfun.com/definitions/line-of-best-fit.htm

Exemplar...



Exercises...

Continue and finish as much of the "Movie Price Analysis" as possible!