

Name: _____
 Period _____

Date: _____
 Henderson – Math 8

Homework for Week 12

Monday: HW# 12A (go to www.khanacademy.org or www.hendersonmath.com for review)

State if the equation shown is linear or not linear.

1.) $y = -x$ _____ $2x - \frac{2}{5}y = 3$ _____

2.) $y = 4x^2 - 9$ _____ $\frac{7}{y} + x = 2$ _____

3.) $y = 5$ _____ $y = \sqrt{3x} + 5$ _____

4.) Explain in words how you were able to determine your answer for $\frac{7}{y} + x = 2$.

Tuesday: HW# 12B (go to www.khanacademy.org or www.hendersonmath.com for review)

5.) Find the rate of change for the following data:

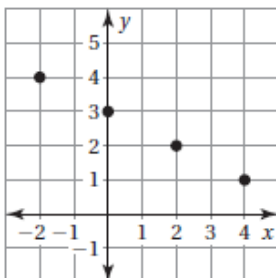
$(-4, 2)$ and $(-4, 3)$

6.) Identify the rate of change in the following linear equation: _____

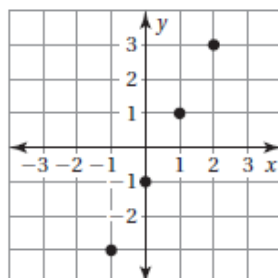
$$y = 9 - 2x$$

7.) Which of the following graphs represents the equation $y = 2x - 1$? _____

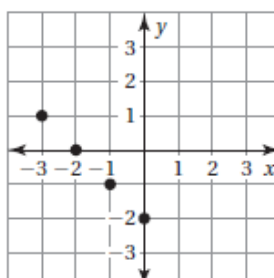
A)



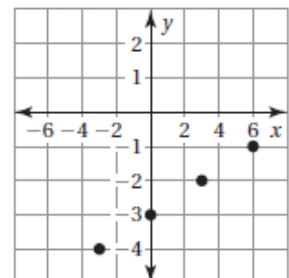
B)



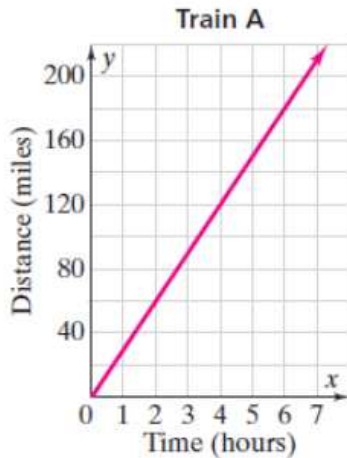
C)



D)



Three trains (A, B, and C) leave a train station at the same time. The graph shows the relationship between time and distance for Train A.



Train B

$$y = 45x$$

Train C

Time (hours)	Distance (miles)
3	105
6	210
9	315
12	420

8. What is the slope of the graph shown?
9. What does this slope represent? (use the axis labels to help you)

10. The relationship between time and distance for Train B is given by the equation above, where x represents hours and y represents miles. Find the rate of change of Train B.

11. The time-distance relationship for Train C is shown in the table above. What is the ratio of distance to time for Train C? (*hint: rate of change*)

12. Which train has the greatest rate of speed, Train A, Train B or Train C? How do you know?