UNIT 3 REVIEW

AGENDA

- Warm-Up
- HW Check
- Socrative
- Review

REMINDERS

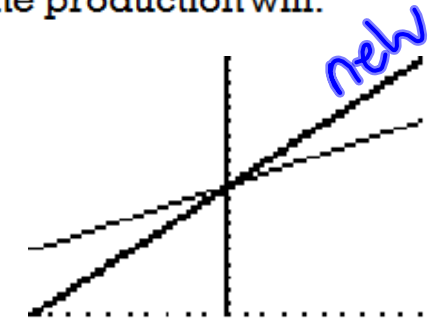
- Unit 3 Test TMR
- Notebook Check TMR
- All HW (2.5, 3.1, 3.2) & quiz corrections Due FRIDAY no exceptions

WARM-UP WEDNESDAY

1. The annual production of a farm crop is modeled by $y = \frac{1}{2}x + 4000$.

If the model is changed to $y = x + 4000$, the production will:

A decrease at the same rate
B increase at double the original rate
C increase at ½ the original rate
D decrease at double the original rate



2. Name the slope of the line. $12x - 2y = 10$

Solve for y

$-12x \quad -12x$

$\frac{-2y}{-2} = \frac{-12x}{-2} + \frac{10}{-2}$

$y = 6x - 5$

$y = mx + b$

$m = 6$

MATH BLITZ

MARK YOUR CALENDARS!

Based on your scores on the TEKS Check, you are required to attend the Algebra 1 EOC Math Blitz on

Tuesday 12/2 Thursday 12/4

Please meet in UPSTAIRS G-Hall before 4:30. The session will conclude at 6:30. Snacks will be provided.

If you received a pink invite, you MUST attend during the day that is circled. Please let Ms. K ASAP if you need to change dates. You need a legitimate reason to switch days! If you did not receive an invite but would like to attend, see Ms. K. Plan with a friend to find a ride home.

If you do not attend, you will receive Saturday School or another consequence.

QUESTIONS, COMMENTS, CONCERNS?

Algebra I - Unit 3: Topic 2 – Application of Changes in *m* & *b*

Practice - Application of Changes in *m* and *b*

Name _____ Date _____ Period _____

Spending Money

Manuel worked all summer and saved $1090. He plans to spend $30 per week.

1. Make a table of values for the situation

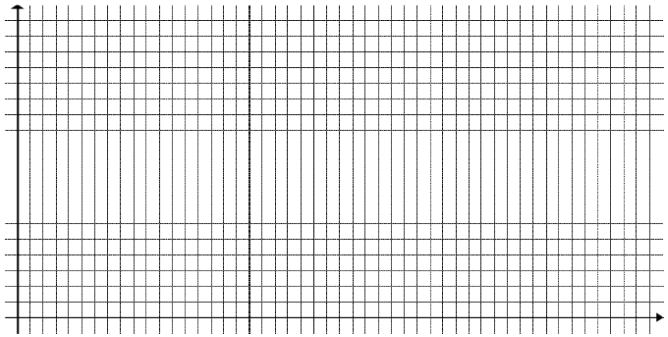
Time (Weeks)	Process	Amount of Money
0		$1090
1	1090 − 30(1)	1060
2	1090 − 30(2)	1030
3	1090 − 30(3)	1000
4		970

2. Write a function rule (equation) for the amount of money Manuel will have after *t* weeks. f(t) = 1090 − 30t

3. How much money will Manuel have after 11 weeks? _____

4. When will Manuel run out of money? _____

5. Graph the function for the given situation. Label your original line and axes.



6. What is the domain of the situation? _____
   What is the range of the situation? _____

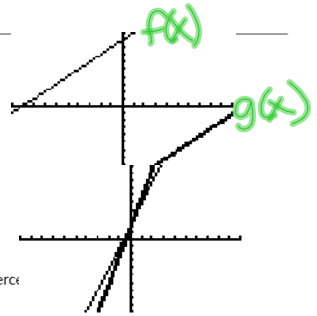
y = 1090 − 30x

7. a) If Manuel had initially earned $1300 what would be the equation of the line? y = 1300 − 30x
   b) Graph and label the new line. How does this line compare to the original? _____
   c) What did not change? slope
   d) What do you know about the two lines? parallel

8. How do the graphs of the function $f(x) = x + 9$ and $g(x) = x - 11$ relate to each other?

Algebra I - Unit 3: Topic 2 – Application of Changes in m & b

A The graph of $f(x)$ is 2 units above the graph of $g(x)$.
B The graph of $f(x)$ is 20 units above the graph of $g(x)$.
C The graph of $f(x)$ is 2 units to the right of the graph of $g(x)$.
D The graph of $f(x)$ is 20 units to the right of the graph of $g(x)$.



9. How does the graph of $y = 3x + 2$ compare to the graph of $y = 4x + 2$?

Steeper.

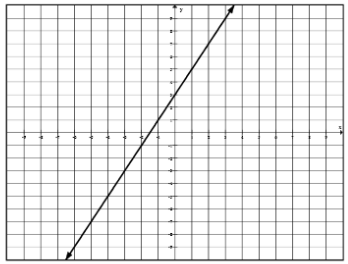
10. If the slope of the equation $y = \frac{-2}{3}x - 4$ is changed to $\frac{2}{3}$ and the y-interc
statement best describes this situation?

A The new line is perpendicular to the original line
B The new line is parallel to the original line
C The new line and the original line have the same y-intercept
D The new line and the original line have the same x-intercept

11. Given the function $y = 4.23x - 65.23$, which statement best describes the effect of increasing the y-intercept by 62.15?

A The new line is parallel to the original.
B The new line is has a greater rate of change.
C The x-intercept increases.
D The y-intercept decreases.

12. The graph of a line is shown below. If the slope of this line is multiplied by -1 and the y-intercept decreases by 2 units, which linear equation represents these changes?



A $y = -2x + 1$
B $y = -x + 1$
C $y = -x - 1$
D $y = \frac{-1}{2}x - 1$

13. Tyler wants to buy a video-game system for $375. He can pay for the system in 12 months if he pays $75 now and $25 each month. How will the number of monthly payments be affected if Tyler pays $75 now and $30 each month?

A He will make 10 fewer monthly payments
B He will make 2 fewer monthly payments
C He will make 3 fewer monthly payments
D He will make 5 fewer payments

DON'T FORGET THIS PAGE!

Name _____ Date _____ Class _____

TEKS A.4.A

LESSON 2-5

Problem Solving

Solving for a Variable

Use the table below, which shows some track and field gold medal winners, to answer questions 1–4. Round all answers to the nearest tenth.

2000 Summer Olympics		
Gold Medal Winner	**Race**	**Time (s)**
M. Greene, USA	100 m	9.87
K. Kenteris, Greece	200 m	20.09
M. Johnson, USA	400 m	43.84
A. Garcia, Cuba	110 m hurdles	13.00

1. Solve the formula $d = rt$ for r.

_____

2. Find Johnson's average speed in meters per second.

_____

3. Find Garcia's average speed in meters per second.

_____

4. The world record of 19.32 seconds in the 200-meter race was set by Michael Johnson in 1996. Find the difference between Johnson's average speed and Kenteris' average speed.

_____

Select the best answer.

5. The cost to mail a letter in the United States is \$0.34 for the first ounce and \$0.23 for each additional ounce. Solve $C = 0.34 + 0.23(z - 1)$ for z.

A $z = \frac{C - 0.34}{0.23}$

B $z = \frac{C - 0.34}{0.23} + 1$

C $z = \frac{C + 0.11}{0.23}$

D $z = C - 0.56$

6. The formula $V = \frac{Bh}{3}$ shows how to find the volume of a pyramid. Solve for B.

F $B = \frac{3V}{h}$ **H** $B = 3Vh$

G $B = 3V - h$ **J** $B = 3V + h$

7. Degrees Celsius and degrees Fahrenheit are related by the equation $C = \frac{5}{9}(F - 32)$. Solve for F.

A $F = 9C + 27$ **C** $F = \frac{5}{9}C + 32$

B $F = \frac{9}{5}C$ **D** $F = \frac{9}{5}C + 32$

8. The cost of operating an electrical device is given by the formula $C = \frac{Wtc}{1000}$ where W is the power in watts, t is the time in hours, and c is the cost in cents per kilowatt-hour. Solve for W.

F $W = 1000C - tc$

G $W = \frac{Ctc}{1000}$

H $W = 1000C + tc$

J $W = \frac{1000C}{tc}$

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UNIT 3 REVIEW

SOCRATIVE

With an internet-capable device, visit m.socrative.com/ or go to the "Socrative Student" app.

Teacher's room: mskmath

Enter in your first AND last name.

Work through the problem set. There will be explanations on how to solve each problem. Take any notes or show work on your paper review. This online review will be worth a grade so try your best!

If you finish or do not have a device: please work on your paper review and wait patiently for someone else to finish with their device.

COMPLETED REVIEW = BONUS POINTS ON TEST

Algebra I Name _____

Unit 3 Test REVIEW Date _____ Period _____

SOLUTIONS WILL BE POSTED ON WEBSITE/TWITTER

For 1-2: Which ordered pair is not a solution for the equation given?

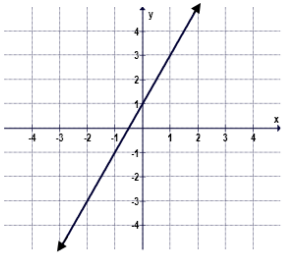
DUE TOMORROW, NOTEBOOK CHECK TOMORROW!

1. $6x + y = 8$ A. (3, -10) B. (-3, 26) C. (2, -4) D. (-1, -4)

2. y=4 A. (0, 4) B. (2, 4) C. (4, -1) D. (-5, 4)

3. Which ordered pair best represents the *y*-intercept of this function?

A. (1, 0)
B. (0, 1)
C. (0, –.5)
D. (.5, 0)

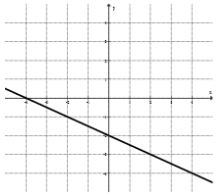


4. What is the *x*-intercept of the equation y = -3x – 12?

5. What is the *y*-intercept of the equation 4x +2y = 8?

6. Which ordered pair best represents the *x*-intercept of the line in the graph?

A. (0, –4)
B. (0, 4)
C. (–4, 0)
D. (4, 0)



Determine the slope of the line that passes through each pair of points.

7.

x	y
5	3
5	-8
5	-12

m = _____

8. (2j, -5j) (-3j, -2j)

m = _____

9. a) The point (0, 8) is in which quadrant or on which axis? _____

b) The point (12, -3) is in which quadrant? _____

Solve the equation for y. Name the slope of the line.

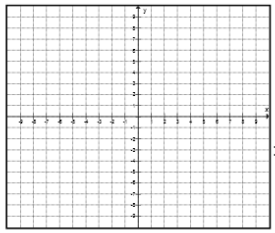
10. $12x - 2y = 10$ **Slope =** _____

11. Find the range for the equation 3x + 2y = -4 if the domain is $\{-2, -1, 0\}$

12. If the point $\left(x, \frac{1}{3}\right)$ is on the graph of $2x + 3y = 6$, find x.

13. Using the equation given, fill in the table and draw the graph.

$3y - 12 = 6x$



X	Y
-3	
-1	
	4
3	
	14

Determine the value of *r* so the line that passes through each pair of points has the given slope.

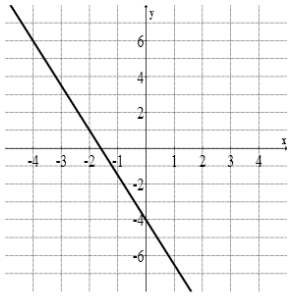
14. $(2, r)$ and $(1, -3)$ m=-3

15. Use the graph to the right to answer the following questions:

a. Write the linear equation

b. Find f(-2)

c. Find f(x) = 6



16. If $f(x)=\frac{2}{3}x^2+8x$, what is the value of $f(6)$?

For 19-20: Determine the independent and dependent variable in each situation.

19. The number of gum balls, *g*, that can be packaged in a box with a volume of *V* cubic units is given by $g = 40V + 15$.

Number of Gum Balls: _____

Volume of the Box: _____

20. Jake works as a sales representative. He earns $1,275 per month plus an 8% commission on his total sales.

Total Income: _____

Total Sales: _____

21. Describe the change of the graph of y = x if the equation changes to y=3x+5.

22. A horizontal line has _____ slope.

23. A vertical line has _____ slope.

24. The annual production of a farm crop is modeled by $y = \frac{1}{2}x + 4000$. If the model is changed to $y = x + 4000$, the production will:

A decrease at the same rate
B increase at double the original rate
C increase at ½ the original rate
D decrease at double the original rate

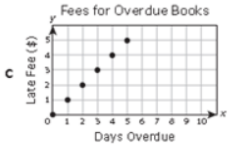
25. Leslie and her cousin went to a restaurant for dinner. Leslie's dinner cost $5 more than her cousin's. If their combined bill was under $25, which inequality best describes the cost of their dinners?

A $x - (x + 5) < 25$
B $x + 5 < 25x$
C $x + (x + 25) < 5$
D $x + (x + 5) < 25$

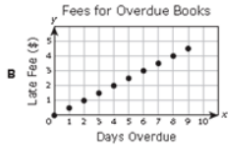
26. The late fee for overdue books at a library is $0.25 per day per book, with a maximum late fee of $5.00 per book. Which graph models the total late fee for 3 books that were checked out on the same day and are overdue?

A

C



B



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