

Secondary 1 Term 1 Review

Name: _____ Date: _____ Period: _____ Teacher: _____

Section 1: Free Response: Answer the following questions. Show all your work.

Simplify completely.

1. $3 \cdot 4 - 6 \div 2 + 2(6 - 4)$

2. $4(2x - 5) + 3(x + 4)$

3. $5 - 2xy + 3(y - 2)$ for $x = -3$, $y = 4$

4. $2x - 5(y - 4)$ for $x = 3$ and $y = -2$.

Solve the following equations for x .

5. $x + 3 = 9$

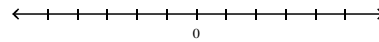
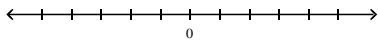
6. $3x - 5 = 16$

7. $2x + 3 = 4x + 15$

Solve the following inequalities for x . Graph the solution on a number line.

8. $-3x > 12$

9. $2x + 3 \geq 15$



Use the following table to answer questions 10 – 12.

x	-2	-1	0	1	2	3
$f(x)$	7	2	-3	-8	-13	-18

10. Find $f(-1)$

11. Find $f(2)$

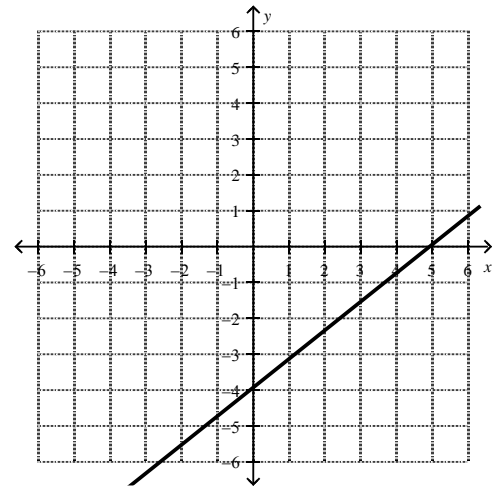
12. Find x if $f(x) = 2$

Use the graph at right for questions 13 – 15.

13. What is the slope of the graph?

14. What is the y-intercept?

15. What is the x-intercept?



Use the following function to answer questions 16 – 17.

$$f(x) = -2x + 10$$

16. What is the value of $f(5)$?

17. If $f(x) = 12$, solve for x .

Section 2: Multiple Choice: Choose the best answer for each question. Show all your work.

Use the list of variables of a school lunch situation is listed below to answer questions 18 – 20.

Variable	Meaning	Numerical Value
B	The number of B oys that eat school lunch	250
G	The number of G irls that eat school lunch	200
S	The cost of a S alad (in dollars)	3
P	The cost of a slice of P izza (in dollars)	2
D	The cost of a D rink (in dollars)	1

18. Give the summary phrase for

$$BP + GS$$

- The total number of boys and girls.
- The total number of boys who bought salad and total number girls who bought pizza.
- The total cost of a slice of pizza and a salad for all the students.
- The total cost of pizza for all the boys and salad for all the girls.

19. Write an expression for the cost for all the boys get a slice of pizza and a drink.

- $B+D$
- $BP + D$
- $B(P + D)$
- BPD

20. What would be the total cost if all the girls got a salad and a drink?

- \$800
- \$601
- \$234
- \$200

For questions 21 – 24. Solve the following equations/inequalities for x .

21. $2x + 3 = -9$

- a. $x = -6$ b. $x = -3$ c. $x = 3$ d. $x = 6$

22. $5x + 3 = 3x + 19$

- a. $x = 16$ b. $x = 11$ c. $x = 8$ d. $x = 2$

23. $\frac{x + y}{4} = 2$

- a. $x = y + 8$ b. $x = y - 8$ c. $x = 8y$ d. $x = 8 - y$

24. $2x + 3 \geq 15$

- a. $x \leq 6$ b. $x \geq 6$ c. $x \leq 9$ d. $x \geq 9$

Use the following situation for questions 25 – 28.

John starts a savings plan with \$200 and adds \$20 every month.

25. What is the slope and y-intercept of the function that models this situation?

- a. slope = 200 b. slope = 20 c. slope = 220 d. slope = -20
y-int = 20 y-int = 200 y-int = 0 y-int = -200

26. What is the recursive formula for the function that models the above situation?

- a. $f(0) = 200, f(n+1) = f(n) + 20$ b. $f(0) = 20, f(n+1) = f(n) + 200$
c. $f(0) = 200, f(n+1) = f(n) - 20$ d. $f(0) = 20, f(n+1) = f(n) - 200$

27. How much will John have saved after 12 months?

- a. \$240 b. \$400 c. \$440 d. \$2640

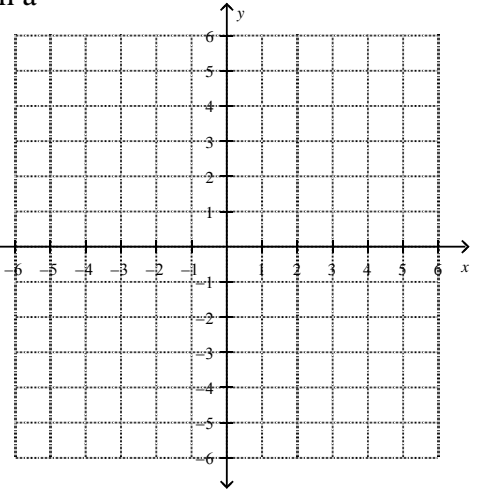
28. How long will it take John to save up for a new computer that costs \$499?

- a. 3 months b) 12 months c) 15 months d) 25 months

Secondary 1 Term 2 Review

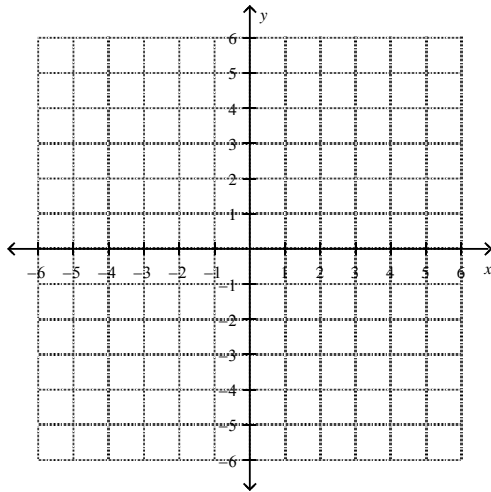
Section 1: Free Response: Answer the following questions. Show all your work.

1. Make a graph and write the equation for the line parallel to $y = \frac{1}{2}x + 2$, with a y-intercept of 3.

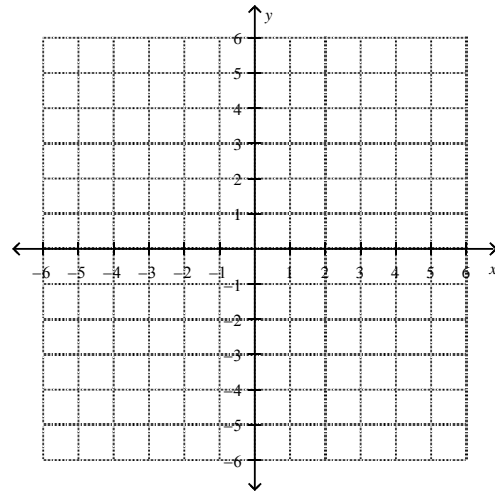


2. Make a graph and write the equation for the line parallel to $y = \frac{1}{2}x + 2$, through the point $(4, -1)$.

3. Graph $y > \frac{3}{2}x - 2$.



4. Graph $y \leq 2x + 3$



Use the following situation to answer the questions 5 – 7.

You deposit \$100 in the bank. You earn 3% interest each year.

5. Make a table showing the amount of money you will have for years 0 to 5.

Months	0	1	2	3	4	5
Money saved						

6. Write a recursive function for the total amount of money you have saved after n months.

7. Write an explicit function for the total amount of money you have saved after x months.

8. How can you tell the growth factor from an explicit exponential equation? For example, what is the growth factor in $f(x) = 1.2(3.4)^x$?

Use the following situation to answer questions 9 – 16?

Suppose that you are placing pennies on a chessboard and put 10 pennies on the first square and 20 pennies on the second square.

9. Make a table showing how many pennies there are on squares 1 – 5 if the reward plan is **linear**.

Square	1	2	3	4	5
Pennies					

10. Write a recursive function to model the number of pennies on the n^{th} square if the reward plan is **linear**.

11. Write an explicit function to model the number of pennies on the x^{th} square if the reward plan is **linear**.

12. How many pennies will be on the 16th square if the reward plan is **linear**?

13. Make a table showing how many pennies there are on squares 1 – 5 if the reward plan is **exponential**.

Square	1	2	3	4	5
Pennies					

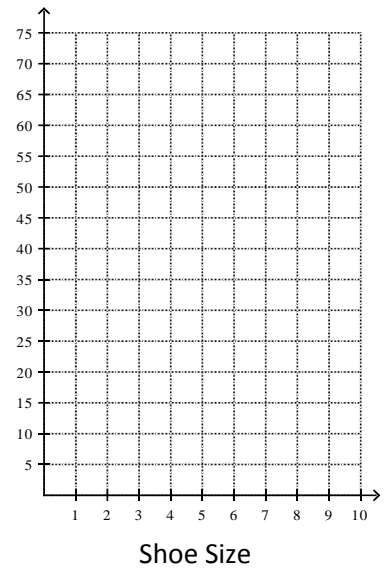
14. Write a recursive function to model the number of pennies on the n^{th} square if the reward plan is **exponential**.

15. Write an explicit function to model the number of pennies on the x^{th} square if the reward plan is **exponential**.

16. How many pennies will be on the 16th square if the reward plan is **exponential**?

Section 2: Multiple Choice: Choose the best answer for each question. Show all your work.
Graph the data from the table and then answer question 17 – 19.

Shoe Size	Height (inches)
7	63
4.5	59.5
6	62.5
6.5	63
10	70
9.5	68.5
8	66



17. Does the relationship have positive, negative, or zero correlation?

- a) positive b) negative c) zero

18. Which of the following equations best models the trend line?

- a) $y = 1x + 0$ b) $y = 2x + 50$ c) $y = \frac{2}{5}x + 50$ d) $y = -2x + 0$

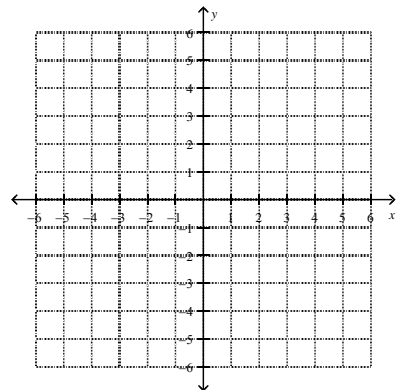
19. Predict the height of someone with a shoe size of 5.5.

- a) 54 b) 85 c) 61 d) 70

20. Make a graph and select an equation for the line perpendicular to

$y = -\frac{4}{5}x + 1$, that has a y-intercept of 4.

- a) $y = \frac{5}{4}x + 4$ b) $y = \frac{5}{4}x - 4$
 c) $y = -\frac{5}{4}x + 4$ d) $y = -\frac{4}{5}x - 4$



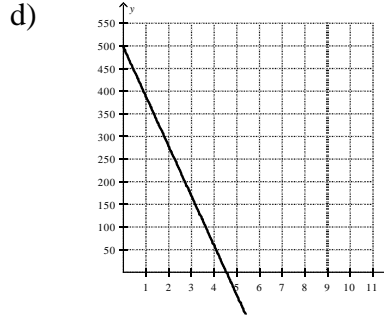
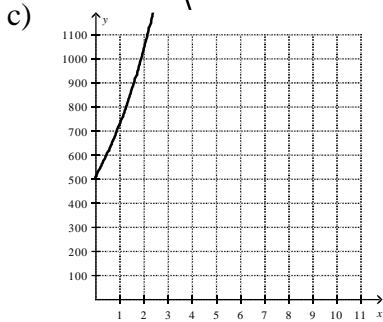
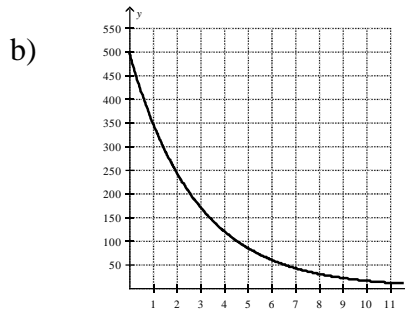
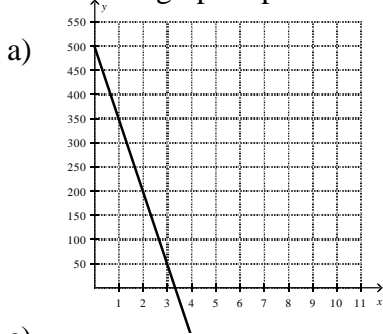
Use the table to answer the questions 22 – 24.

Years	0	1	2	3
\$ in Bank	500.00	350.00	245.00	171.50

22. Which of the following best describes the relationship in the table?

- a) linear growth b) exponential growth c) linear decreasing d) exponential decay

23. Which graph represents the relationship in the table?



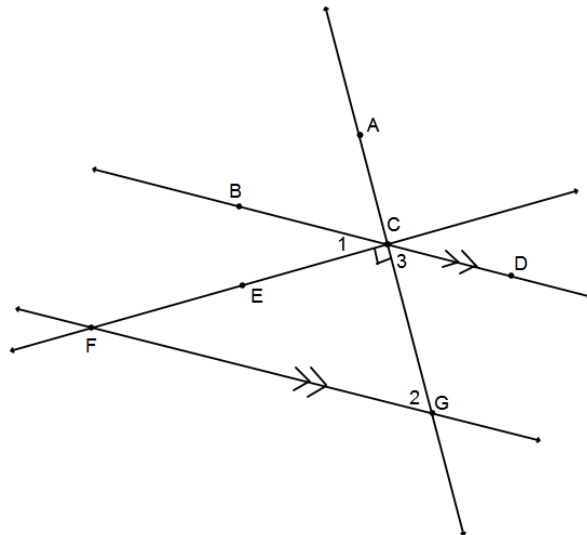
24. How much money will be saved in the bank after 8 years?

- a) \$28.82 b) -\$700 c) \$8673.33 d) \$120.05

Use the diagram to answer questions 25 and 26.

25. Which angle is a right angle?

- a) $\angle 1$ b) $\angle 3$
 c) $\angle ECG$ d) $\angle ACD$



26. Which is another name for $\angle 1$?

- a) $\angle ACE$ b) $\angle BCE$
 c) $\angle FEC$ d) $\angle ECG$

27. Which of the following represents a line segment?

- a) b)
 c) d)