

Algebra 1 Mastery Test #3 Review

- .
1. $2 + 3(3 + 4)^2$
 2. Is 7 a solution of $2w + 3 \geq 23$?
 3. Is $x = 2$ a solution of the inequality $5x - 2 \geq 7$?
 4. A jumbo jet carries 370 passengers, 28 in first class, and the remainder in coach. If the average first class ticket is \$760 and the average coach ticket is \$353, how much will the airline gross if the plane is full?
 5. Find the domain of the function.

Input	Output
5	2
14	6
10	4

Write a function rule for the input-output table.

6.

Input x	2	3	4	5
Output y	6	9	12	15

7. Make an input-output table to represent the function. Use 1, 2, 3, 4, and 5 as the domain.
 $y = 6x + 5$
8. Determine whether the relation is a function.

Joann's age (years)	11	12	13	14	15	16
Joann's height (inches)	56	57	58	63	65	65

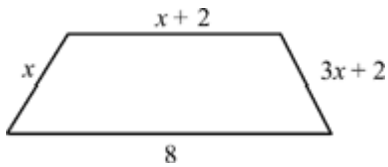
Simplify:

9. $\sqrt{16}$

Solve the equation.

10. $2x - 22 - 3x + 12 = 2$
11. $7x + 7 = x - 1$

12. The trapezoid below has a perimeter of 20. Solve for x .



Solve the proportion. Check your solution.

13. $\frac{3}{x-4} = \frac{5}{x}$

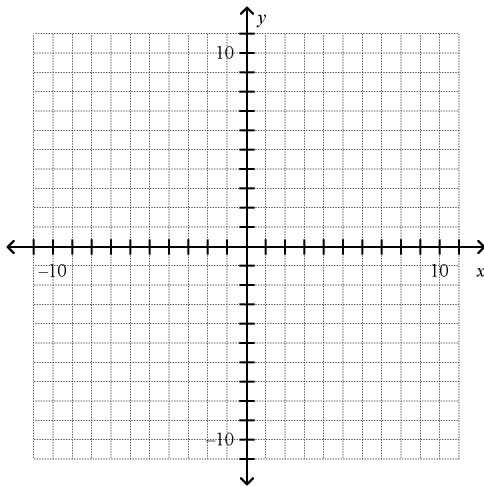
14. Solve $240 = 6z + c$ for c .

15. Solve $200 = fb + y$ for f .

16. Complete the table. Then graph the function.

$$y = -\frac{6}{7}x + 4$$

x	-3	-2	0	2	3
y					



- _____ 17. Find the slope of the line that contains $(-9, 1)$ and $(7, -8)$.

a. 0 b. $-\frac{9}{16}$ c. $-\frac{16}{9}$ d. undefined

18. During the first 160 minutes of flight, a jet climbs from ground level to an altitude of about 57,000 ft. What is the jet's rate of change in altitude during this time? Round your answer to the nearest hundred.

Name: _____

ID: A

- _____ 19. Find the slope and y -intercept of the line with the equation $-6x + 3y = -54$.
- | | |
|---------------------|---------------------|
| a. $m = 2, b = -18$ | c. $m = -2, b = 18$ |
| b. $m = 18, b = -2$ | d. $m = -18, b = 2$ |
20. Rewrite the equation $8x - 3y - 5 = 0$ in slope-intercept form.

**Algebra 1 Mastery Test #3 Review
Answer Section**

1. ANS:
149

TOP: Lesson 1.2 Apply Order of Operations

2. ANS:
no

TOP: Lesson 1.4 Write Equations and Inequalities

3. ANS:
Yes

TOP: Lesson 1.4 Write Equations and Inequalities

4. ANS:
\$142,006

TOP: Lesson 1.5 Use a Problem Solving Plan

5. ANS:
The domain is the collection of the input values: 5, 14, and 10.

TOP: Lesson 1.7 Represent Functions as Rules and Tables

6. ANS:
 $y = 3x$

TOP: Lesson 1.7 Represent Functions as Rules and Tables

7. ANS:

Input	1	2	3	4	5
Output	11	17	23	29	35

TOP: Lesson 1.7 Represent Functions as Rules and Tables

8. ANS:
Yes, the relation is a function.

TOP: Lesson 1.8 EXT Determine Whether a Relation is a Function

9. ANS:
4

TOP: Lesson 2.1 Find Square Roots and Compare Real Numbers

10. ANS:
-12

TOP: Lesson 2.4 Solve Multi-Step Equations

11. ANS:

$$-\frac{4}{3}$$

TOP: Lesson 2.5 Solve Equations with Variables on Both Sides

12. ANS:

1.6

TOP: Lesson 2.4 Solve Multi-Step Equations

13. ANS:

10

TOP: Lesson 2.7 Solve Proportions Using Cross Products

14. ANS:

$$c = 240 - 6z$$

TOP: Lesson 2.8 Rewrite Equations and Formulas

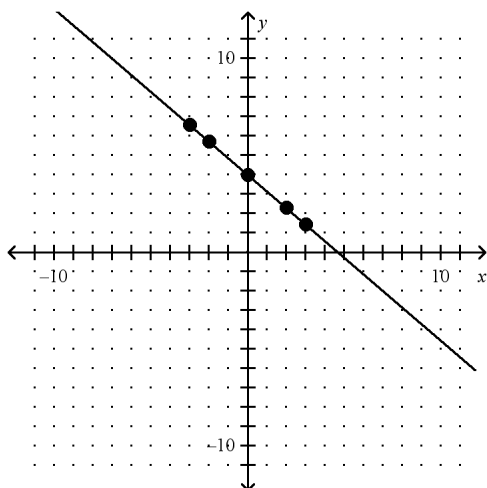
15. ANS:

$$f = \frac{200 - y}{b}$$

TOP: Lesson 2.8 Rewrite Equations and Formulas

16. ANS:

x	-3	-2	0	2	3
y	$6\frac{4}{7}$	$5\frac{5}{7}$	4	$2\frac{2}{7}$	$1\frac{3}{7}$



TOP: Lesson 3.2 Graph Linear Equations

17. ANS: B

TOP: Lesson 3.4 Find Slope and Rate of Change

18. ANS:
400 feet per minute.

TOP: Lesson 3.4 Find Slope and Rate of Change

19. ANS: A TOP: Lesson 3.5 Graph Using Slope-Intercept Form

20. ANS:

$$y = \frac{8}{3}x - \frac{5}{3}$$

TOP: Lesson 3.5 Graph Using Slope-Intercept Form