Math 980 Modules 1 and 2 Objectives Review Answer Key

Module 1 - Linear Equations in One Variable

1.1 Solve One-Step Linear Equations

1.) x = –7

2.) a = 18

1.2 Solve Two-Step Linear Equations

3.) y = 3

4.) x = $-\frac{5}{2}$

1.3 Solve Linear Equations by Combining Like Terms and the Distributive Property

5.) x = –12

6.) b = –13

1.4 Solve Linear Equations with Variables on Both Sides of the Equation

7.) z = $-\frac{1}{3}$

8.) No Solution

1.5 Solve Linear Equations Containing Fractions

9.) y = 28

10.) x = $\frac{5}{14}$

1.5 Solve Proportions

11.) x = 16

12.) x = 93

1.6 Solve Linear Equations Containing Decimals

13.) x = –19.8

14.) x = 10

1.7 Solving Applications Using Linear Equations

15.) The number is $\frac{4}{5}$

16.) The number is 15.

17.) The consecutive integers are 10, 11, and 12.

18.) The consecutive odd integers are 45 and 47.

19.) The consecutive even integers are –68, –66, and –64.

20.) The length is 9 meters and the width is 6 meters.

21.) There are 36 orange marbles and 61 yellow marbles.

22.) The pieces are 4 inches and 12 inches.

1.8 Solve Applications of Variation and Percents

23.) y = 15

24.) y = $\frac{3}{2}$

25.) $474.15

26.) The number is 8.89.

27.) 34.3%

28.) The number is 82.

29.) $93.22

30.) 400 pages

1.9 Evaluate Formulas

31.) The surface area is 198cm^2.

32.) The volume is 180cm^3.

1.9 Solve a Formula for a Given Variable

33.) $\frac{8}{x}$

34.) y = $\frac{c-ax}{b}$

1.9 Solving Areas

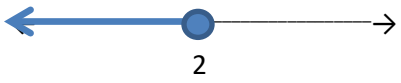
35.) 102 ft^2

36.) 52 ft^2

Module 2 – Linear Inequalities and Absolute Value

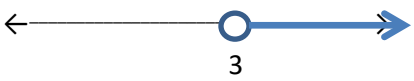
2.1 Solve, Graph, and Give Interval Notation for Linear Inequalities with One Variable

37.) $x \leq 2$



(–∞, 2]

38.) $x > 3$



(3, ∞)

2.2 Solve Applications Using Linear Inequalities

39.) Sarah's total sales will need to be at least $1,200,000.

40.) The student needs to score at least 69 on the fourth test to ensure a C.

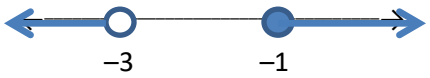
2.3 Find the Intersection and Union of Sets

41.) (A U B) = {1, 5, 7, 8, 11, 14, 15, 16, 17, 18, 19, 20}

(A ∩ B) = {7, 16, 18, 20}

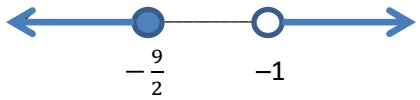
2.3 Solve, Graph, and Give Interval Notation for Compound Inequalities (Disjunction)

42.) $x < -3$ OR $x \geq -1$



$(-\infty, -3) \cup [-1, \infty)$

43.) $x \leq -\frac{9}{2}$ OR $x > -1$



$(-\infty, -\frac{9}{2}] \cup (-1, \infty)$

2.4 Solve, Graph, and Give Interval Notation for Compound Inequalities (Conjunction)

44.) $x \leq 3$ AND $x > \frac{1}{3}$

$(\frac{1}{3}, 3]$

45.) $x < 3$

$(-\infty, 3)$

46.) $-3 < x < 2$

$(-3, 2)$

47.) $0 \leq x < 3$

$[0, 3)$

2.5 Solve Absolute Value Equations

48.) $x = -15, 5$

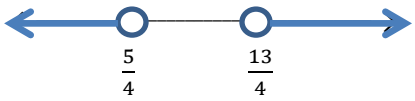
49.) $x = 6, -6$

2.6 Solve, Graph, and Give Interval Notation for Absolute Value Inequalities

50.) All real numbers

$(-\infty, \infty)$

51.) $x < \frac{5}{4}$ OR $x > \frac{13}{4}$



$(-\infty, \frac{5}{4}) \cup (\frac{13}{4}, \infty)$

52.) $\frac{2}{3} \leq x \leq 2$

$[\frac{2}{3}, 2]$

2.7 Identify the Domain, Range, and Determine Whether the Relation is a Function

53.) The domain is: {–6}

The range is: {7, 6, 5, 4}

The relation is NOT a function.

The x-values are not unique.

54.) The domain is: {8, 7, 6, 5}

The range is: {2}

The relation IS a function.

The x-values are unique.

2.7 Find the Domain of Functions

55.)$(-\infty, -4) \cup (-4, \infty)$

56.) $[\frac{1}{2}, \infty)$

2.7 Evaluate Functions

57.) $f(2)=10$

$f(-2)=-2$