

1.1 Addition of Integers

Answers

1. -9

2. -2

3. 9

4. 2

5. 4

6. -4

7. -7

8. 7

9. 4

10. -8

11. -4

12. 1

13. 13

14. -2

15. -4

16. $-6x + 4x = -2x$

17. $7x - 2x = 5x$

18. $3x^2 + 3x - 2x^2 - 5x = x^2 - 2x$

19. $2x^2 + 4x - 6x = 2x^2 - 2x$

20. $-12x + 7x = -5x$

1.2 Addition of Fractions

Answers

1. $\frac{7}{8}$

2. $\frac{11}{15}$

3. $\frac{8}{9}$

4. $\frac{23}{21} = 1\frac{2}{21}$

5. $\frac{9}{10}$

6. $\frac{7}{6} = 1\frac{1}{6}$

7. $\frac{7}{10}$

8. $\frac{11}{9} = 1\frac{2}{9}$

9. $\frac{9}{8} = 1\frac{1}{8}$

10. $\frac{9}{10}$

11. $\frac{25}{22} = 1\frac{3}{22}$

12. $\frac{31}{24} = 1\frac{7}{24}$

13. $\frac{19}{12} = 1\frac{7}{12}$

14. $\frac{37}{30}$

15. $\frac{31}{20} = 1\frac{11}{20}$

16. $\frac{25}{16} = 1\frac{9}{16}$

17. $\frac{59}{24} = 2\frac{11}{24}$

18. Answers vary. Possible answer: $\frac{1}{2} + \frac{1}{3}$

19. $5\frac{11}{12}$

20. Justin is correct. Amanda made the mistake of adding the denominators as well as the numerators.

1.3 Addition of Decimals

Answers

1. 23.78
2. 79.883
3. 5.897
4. 51.798
5. 103.98
6. 77.98
7. 208.747
8. 110.228
9. 301.397
10. 301.397
11. -64.56
12. 39.67
13. 13.817
14. -110.748
15. -29.64
16. \$3832.86
17. \$215.03
18. \$824.40
19. \$67.08
20. 514.65 yards

1.4 Subtraction of Integers

Answers

1. -7

2. -3

3. 9

4. 2

5. 1

6. 4

7. 5

8. -2

9. 4

10. 3

11. 6

12. -2

13. 12

14. 7

15. 10

16. $4x - 9x = -5x$

17. $6x - 3x = 3x$

18. $5x^2 + 2x - 2x^2 - 4x = 3x^2 - 2x$

19. $2x^2 + x - 3x^2 - 2x = -x^2 - x$

20. $7x - 2x = 5x$

1.5 Subtraction of Fractions

Answers

1. $\frac{1}{8}$

2. $\frac{2}{15}$

3. $-\frac{1}{9}$

4. $\frac{4}{21}$

5. $\frac{1}{2}$

6. $\frac{1}{6}$

7. $\frac{3}{10}$

8. $\frac{4}{9}$

9. $\frac{3}{8}$

10. $\frac{1}{5}$

11. $\frac{3}{22}$

12. $\frac{5}{24}$

13. $\frac{1}{12}$

14. $\frac{13}{30}$

15. $\frac{1}{20}$

16. Sally used $\frac{1}{6}$ more cups of flour.17. Alyssa used $\frac{1}{2}$ cup more ingredients.18. Possible answer: $\frac{5}{8} - \frac{1}{4} = \frac{3}{8}$ 19. $\frac{41}{12} = 3\frac{5}{12}$ more cans

20. Sierra is correct. Clark accidentally subtracted the denominators.

1.6 Subtraction of Decimals

Answers

1. 27.05
2. 30.6083
3. 533.557
4. 3.9665
5. 8.494
6. 32.29
7. -13.932
8. -26.654
9. -929.586
10. -5.7
11. The diameter is .02374 inches larger
12. 1.132 ohms
13. 177.7°F
14. 18.84°F
15. Answers vary.

1.7 Multiplication of Real Numbers

Answers

1. 14

2. 12

3. -15

4. -8

5. -4

6. f

7. b

8. d

9. c

10. a

11. e

12. 117

13. -303.232

14. $\frac{20}{63}$ 15. $\frac{299}{6} = 49\frac{5}{6}$

16. -127.4454

1.8 Division of Real Numbers

Answers

1. 7

2. -7

3. 3

4. 4

5. -5

6. -63

7. 64

8. -28

9. 30

10. 10

11. $\frac{35}{48}$

12. 2.75

13. 12.05

14. $\frac{22}{9}$

15. 72

16. $5888 \div 3.68 = 1600$

17. $23\frac{3}{8} \div 4\frac{1}{4} = 5\frac{1}{2}$ inches

18. $32\frac{5}{8} \div 3 = 10\frac{7}{8}$

19. $3.5 \div .25 = 14$; $4.625 \div .25 = 18.5$ Actual size is 14 ft by 18.5 ft.

20. $24\frac{3}{4} \div 3\frac{1}{2} = 7\frac{1}{14}$

1.9 Properties of Real Number Addition

Answers

1. c)

2. e)

3. b)

4. d)

5. a)

6. 18

7. 34

8. 4

9. 21

10. 8

11. associative property

12. identity property

13. commutative property

14. closure property

15. inverse property

1.10 Properties of Real Number Multiplication

Answers

1. c)
2. e)
3. b)
4. a)
5. d)
6. d
7. c
8. b
9. a
10. d
11. associative property of multiplication
12. identity property
13. commutative property
14. inverse property
15. closure property

1.11 Order of Operations with Positive Real Numbers

Answers

1. 40

2. 9

3. 31

4. 16

5. 20

6. $520 - 5 \times 68 + 300 = 480$ wraps

7. $40 \times (2 \times 12 + 3 \times 16) + 2140 = \5020

8. $15 \times 19 - 8 \times 7 = \229

9. $472 + 85 \times 8 = \$1152$

10. $100 - (2 \times 8 + 4 \times 19) = \8

11. 23

12. 11

13. 33

14. 42

15. 132

1.12 Order of Operations with Negative Real Numbers

Answers

1. c

2. b

3. a

4. b

5. d

6. a

7. -1

8. -17

9. -66

10. -78

11. 24

12. -29

13. -40

14. -17

15. 2

1.13 Decimal Notation

Answers

1. 0.83333 ...

2. 0.5454 ...

3. 0.15

4. 0.769230769230 ...

5. 0.375

6. $\frac{13}{40}$ 7. $3\frac{8}{11}$ 8. $\frac{27}{110}$ 9. $\frac{309}{500}$ 10. $\frac{4}{11}$

11. 0.78125

12. 0.34375

13. 0.05

14. $\frac{9}{128}$ 15. $\frac{3}{16}$

1.14 Real Number Line Graphs

Answers

- The set of all real numbers greater than 8.
- The set of all integers less than or equal to -3.
- The set of all real numbers between -4 and 6, including -4 and 6.
- The set of all whole numbers between 5 and 11, including 5 and 11.
- The set of all natural numbers greater than or equal to 6.
- $\{x | -6 < x < 7, x \in R\}$
- Possible answer: $\{x | x \geq 5, x \in N\}$
- $\{x | x < -8, x \in R\}$
- $\{x | -4 \leq x \leq 3, x \in Z\}$
- $\{x | -7 \leq x < 1, x \in R\}$
- $\{x | x \leq 4.5, x \in R\}$
- $\{x | x \geq 19, x \in R\}$
- $\{x | 10 \leq x \leq 16, x \in W\}$
- $\{x | -6 < x \leq -1, x \in R\}$
- $\{x | 100 \leq x \leq 225, x \in W\}$
-



17.



18.



1.15 Real Number Comparisons

Answers

- 0, 0.28, 0.33, 0.45, 0.5, 0.65, 0.75, 2
- 0, 0.21, 0.3, 0.3, 0.31, 0.32, 0.4
- 0.4, -0.32, -0.31, -0.3, -0.3, -0.21, 0
- $-2, -\frac{1}{2}, -\frac{1}{3}, 0, \frac{1}{2}, \frac{2}{3}, 3$
- $-\sqrt{2}, -\frac{\pi}{3}, -0.25, 0, 0.3, 1, 1.8$
- Possible answer: 9
- Possible answer: -12.5
- Possible answer: -12.015
- Possible answer: -7.55
- Possible answer: $\frac{7}{42}$
- Possible answer: $\frac{20}{45}$
- Possible answer: $-\frac{7}{36}$
- Possible answer: $-\frac{11}{20}$
- $-3.6, -2, -\frac{7}{5}, 0, \frac{3}{8}, \frac{1}{2}, \frac{2}{3}, 4$
- $-\sqrt{7}, -\frac{2\pi}{3}, -\frac{5}{4}, -1, -\frac{3}{5}, 0, \frac{7}{12}, 3, \sqrt{10}$