

# Math Connections



## Math Course 2—Week 1 Answers

### Simple Probability 1.1.2, 1.2.1 - 1.2.3 Answers

#### Answers

- |                                |  |   |   |
|--------------------------------|--|---|---|
| 1. $\frac{1}{6}$ ; theoretical | 2. $\frac{1}{4}$   | 3. $\frac{26}{40}; \frac{3}{6}$                       | 4. $\frac{1}{3}$ ; theoretical                        |
| 5. experimental                | 6. $\frac{39+241}{310,000,000}$<br>$\approx 0.000\ 000\ 903$ | 7. $\frac{10+2+18}{107} \approx 0.28$<br>experimental | 8. $\frac{55+52}{300} \approx 35.7\%$<br>experimental |

### Measures of Central Tendency 1.1.3 and 1.1.4 Answers

#### Answers

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|--------------------------|----------------------------|---------------------------|----------------------------|
| 1. 30.57                 | 2. $30\bar{3}$             | 3. $86.\bar{13}$          | 4. $106.\bar{6}$           |
| 5. median 30;<br>range 8 | 6. median 28.5;<br>range 9 | 7. median 82;<br>range 47 | 8. median 107;<br>range 27 |
| 9. 98                    | 10. 61                     | 11. 3754                  | 12. 14                     |

### Choosing A Scale 1.2.2 and Answers

#### Answers

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|--|--|
| 1. 2, 4, 6, 8, 10, 12                                    | 2. -9, -6, -3, 0, 3, 6   |
| 3. 86, 102, 118, 134                                     | 4. -2, 8, 18, 28, 38   |
| 5. -12, -11, -10, -9                                     | 6. -18, -14, -12, -10, -8  |
| 7. x: 2, 4, 6, 8, 12<br>y: 4, 8, 12, 16, 24              | 8. x: 3, 6, 9, 15, 18<br>y: 4, 8, 12, 20, 24   |
| 9. x: 60, 120, 180, 240, 360<br>y: 40, 80, 120, 160, 240 | 10. x: $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, 1\frac{1}{4}, 1\frac{1}{2}$<br>y: $\frac{1}{2}, 1\frac{1}{2}, 2, 2\frac{1}{2}, 3$ |

## Equivalent Fractions 1.2.3 and 1.2.5 Answers

### Answers

1.  $\frac{5}{5}, 20$     2.  $\frac{4}{4}, 20$     3.  $\frac{19}{19}, 171$     4.  $\frac{4}{4}, 12$     5.  $\frac{6}{6}, 30$     6.  $\frac{3}{3}, 18$

## Operations With Fractions 1.2.6 and 1.2.8 Answers

### Answers

1.  $\frac{19}{20}$      2.  $\frac{13}{21}$      3.  $\frac{17}{12} = 1\frac{5}{12}$  

## Diamond Problems 2.1.1 Answers

### Answers

1.  $-32$  and  $-4$     2.  $-4$  and  $-6$     3.  $-6$  and  $6$     4.  $6$  and  $-1$   
5.  $4.56$  and  $5$     6.  $5$  and  $40.5$     7.  $3.4$  and  $11.56$     8.  $3$  and  $6.2$   
9.  $-\frac{1}{14}$  and  $-\frac{5}{14}$     10.  $\frac{13}{10}$  and  $\frac{13}{50}$     11.  $\frac{1}{2}$  and  $\frac{7}{5}$     12.  $\frac{1}{3}$  and  $\frac{1}{3}$   
13.  $xy$  and  $x + y$     14.  $a$  and  $2a$     15.  $-6b$  and  $-48b^2$     16.  $4a$  and  $12a^2$

## Operations with Decimals 2.1.1 Answers

### Answers

- |                    |                   |                 |                           |               |
|--------------------|-------------------|-----------------|---------------------------|---------------|
| 1. 12.6            | 2. 6.75           | 3. 45.42        | 4. 131.14                 | 5. 696.73     |
| 6. 435.392         | 7. 56.8383        | 8. 97.34936     | 9. 10.000                 | 10. 100.0000  |
| 11. 1.7937         | 12. 2.13087       | 13. 88.194      | 14. 115.973               | 15. 305.245   |
| 16. 504.231        | 17. 51.856        | 18. 337.258     | 19. 347.2732              | 20. 459.98476 |
| 21. 4.13           | 22. 1.88          | 23. 1.332       | 24. 3.285                 | 25. 2.624     |
| 26. 3.651          | 27. 6.569         | 28. 7.63        | 29. 5.348                 | 30. 8.957     |
| 31. 0.362          | 32. 0.257         | 33. 1.2862      | 34. 1.547                 | 35. 2.436     |
| 36. 1.394          | 37. 5.815         | 38. 4.427       | 39. 11.2304               | 40. 43.7067   |
| 41. 46.976         | 42. 14.9513       | 43. 0.376       | 44. 0.15                  | 45. 12.5632   |
| 46. 0.04982        | 47. 16.578        | 48. 12.14946    | 49. 0.000020              | 50. 0.0000028 |
| 51. 0.10105        | 52. 0.031104      | 53. 0.000000078 | 54. 0.000000130           | 55. 0.000838  |
| 56. 0.0004763      | 57. 0.2418        | 58. 0.1806      | 59. 1.4                   | 60. 0.02105   |
| 61. 1.7875 or 1.79 | 62. 3.664 or 3.66 | 63. 24.55       | 64. $3.86\bar{3}$ or 3.86 | 65. 4.18      |
| 66. 4.74           | 67. 23,650        | 68. 13,400      | 69. 125,000               | 70. 8400      |
| 71. 41.25          | 72. 29.05         | 73. 4209.09     | 74. 2334.78               | 75. 5.04      |
| 76. 11.98          | 77. 1007          | 78. 1407        | 79. 47.11                 | 80. 95.75     |

Fraction - Decimal - Percent equivalent 2.1.1 and 2.1.2Answers

**Answers**

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|------------------------------------|---------------------------------------|-------------------|-------------------------------------|
| 1. 0.25                            | 2. $\frac{1}{2}$                      | 3. $\frac{3}{4}$  | 4. 0.75                             |
| 5. 38%                             | 6. 20%                                | 7. $\frac{3}{10}$ | 8. 0.125                            |
| 9. $0.3\bar{3}$                    | 10. 8%                                | 11. 0.87          | 12. 60%                             |
| 13. $\frac{2}{5}$                  | 14. $\frac{13}{20}$                   | 15. $0.1\bar{1}$  | 16. $\frac{5}{4}$ or $1\frac{1}{4}$ |
| 17. 1.6                            | 18. 325%                              | 19. 0.0625; 6.25% | 20. $0.\overline{142859}$           |
| 21. $\frac{43}{100}$ ; 0.43        | 22. $37\frac{1}{2}\%$ ; $\frac{3}{8}$ | 23. 0.875; 87.5%  |                                     |
| 24. $\frac{12}{99} = \frac{4}{33}$ | 25. $\frac{175}{999}$                 |                   |                                     |