

# PARENT PACKET

## Sail into Summer with Math!



## For Students Entering Algebra

This summer math booklet was developed to provide students an opportunity to review grade level math objectives and to improve math performance.

## Algebra Summer Mathematics Packet Answer Key

### Answers to Fraction Operations [Pg. 1]

- |                     |                          |                       |                    |
|---------------------|--------------------------|-----------------------|--------------------|
| 1. $1\frac{11}{21}$ | 2. $1\frac{23}{36}$      | 3. $\frac{23}{55}$    | 4. $\frac{10}{63}$ |
| 5. $\frac{4}{11}$   | 6. $\frac{7}{15}$        | 7. $4\frac{2}{7}$     | 8. $1\frac{2}{33}$ |
| 9. $\frac{14}{93}$  | 10. $1\frac{1681}{1980}$ | 11. $2\frac{64}{495}$ |                    |

### Answers to Decimal Operations [Pg. 2]

- |             |             |          |            |
|-------------|-------------|----------|------------|
| 1. 123.109  | 2. 1233.188 | 3. 31.31 | 4. 496.188 |
| 5. 4103.386 | 6. 8813.293 | 7. 2.52  | 8. 0.2001  |
| 9. 18.6984  | 10. 2.5284  | 11. 2.01 | 12. 3.608  |
|             |             |          | 13. 3.256  |

### Answers to Rename Fractions, Percents, and Decimals [Pg. 3]

- |                                  |                                |  |                                |
|----------------------------------|--------------------------------|--|--------------------------------|
| 1. $\frac{1}{25}$ , 0.04, 4%     | 2. $1\frac{1}{4}$ , 1.25, 125% | 3. $\frac{2}{3}$ , $\frac{2}{3}$ , 66.6% | 4. $1\frac{7}{10}$ , 1.7, 170% |
| 5. $\frac{3}{500}$ , 0.006, 0.6% | 6. $3\frac{1}{2}$ , 3.5, 350%  | 7. $\frac{9}{10}$ , 0.9, 90%             |                                |
| 8. $\frac{7}{10}$ , 0.7, 70%     | 9. $\frac{17}{25}$ , 0.68, 68% | 10. $\frac{7}{1000}$ , 0.007, 0.7%       |                                |

### Answers to Add and Subtract Mixed Numbers [Pg. 4]

- |                     |                       |                    |
|---------------------|-----------------------|--------------------|
| 1. $9\frac{1}{10}$  | 2. $15\frac{44}{175}$ | 3. $16\frac{4}{9}$ |
| 4. $1\frac{47}{90}$ | 5. $6\frac{53}{60}$   | 6. $5\frac{5}{36}$ |

### Answers to Multiply and Divide Mixed Numbers [Pg. 5]

- |                      |                    |                      |                     |                    |
|----------------------|--------------------|----------------------|---------------------|--------------------|
| 1. $49\frac{11}{21}$ | 2. $22\frac{2}{3}$ | 3. $42\frac{3}{4}$   | 4. $5\frac{19}{20}$ | 5. $\frac{77}{93}$ |
| 6. $\frac{33}{100}$  | 7. $\frac{31}{42}$ | 8. $1\frac{25}{497}$ | 9. $1\frac{52}{63}$ |                    |

**Answers to Squares and Square Roots [Pg. 6]**

- |        |        |         |         |       |
|--------|--------|---------|---------|-------|
| 1. 81  | 2. -64 | 3. -64  | 4. 7    | 5. 17 |
| 6. 4   | 7. 16  | 8. -108 | 9. 125  | 10. 3 |
| 11. 75 | 12. 4  | 13. 3   | 14. -14 |       |

**Answers to Laws of Exponents [Pg. 7]**

- |                    |                    |              |             |              |           |
|--------------------|--------------------|--------------|-------------|--------------|-----------|
| 1. $5^6$           | 2. $7^2$           | 3. $12^{12}$ | 4. $6^{10}$ | 5. $5^5$     | 6. $10^8$ |
| 7. $\frac{1}{7^3}$ | 8. $\frac{1}{3^4}$ | 9. 1         | 10. -1      | 11. $3^{21}$ | 12. 1     |

**Answers to Find Percent of a Number [Pg. 8]**

- |           |          |          |           |           |            |
|-----------|----------|----------|-----------|-----------|------------|
| 1. 1372.5 | 2. 3.15  | 3. 385.2 | 4. 8.1    | 5. 2.08   |            |
| 6. 512    | 7. 539.6 | 8. 57    | 9. 748.2  | 10. 414.8 | 11. 67.875 |
| 12. 67.2  | 13. 46.8 | 14. 1.92 | 15. 0.435 | 16. 1.296 |            |

**Answers to Solve Problems using Percent [Pg. 9]**

- |                      |             |              |
|----------------------|-------------|--------------|
| 1. \$168.42          | 2. \$60.96  | 3. \$3256.31 |
| 4. \$49.35, \$115.15 | 5. \$147.81 | 6. \$9804.00 |

**Answers to Integers I [Pg. 10]**

- |          |            |            |              |            |          |          |
|----------|------------|------------|--------------|------------|----------|----------|
| 1. -9    | 2. -7      | 3. 15      | 4. -13       | 5. 16      | 6. -9    | 7. -13   |
| 8. -15   | 9. 2       | 10. -14.5  | 11. -13.85   | 12. 11.1   | 13. 8    | 14. 12.7 |
| 15. 45.1 | 16. -31.96 | 17. -20.82 | 18. -104.759 | 19. 15.232 | 20. 60.1 |          |

**Answers to Integers II [Pg. 11]**

- |         |         |         |        |        |         |        |
|---------|---------|---------|--------|--------|---------|--------|
| 1. -72  | 2. 240  | 3. 24   | 4. -15 | 5. -3  | 6. -7   | 7. 6   |
| 8. -80  | 9. 12   | 10. 0   | 11. 3  | 12. 12 | 13. -1  | 14. -6 |
| 15. -67 | 16. -39 | 17. -10 | 18. 5  | 19. -8 | 20. 128 |        |

**Answers to Solving Equations I [Pg. 12]**

- |              |               |             |              |            |
|--------------|---------------|-------------|--------------|------------|
| 1. $x = -21$ | 2. $t = -5$   | 3. $t = 3$  | 4. $r = 96$  | 5. $y = 1$ |
| 6. $h = -13$ | 7. $p = -128$ | 8. $k = -4$ | 9. $p = -26$ |            |

**Answers to Solving Equations II [Pg. 13]**

- |                                  |              |              |              |
|----------------------------------|--------------|--------------|--------------|
| 1. $t = -7$                      | 2. $m = 50$  | 3. $r = 7.5$ | 4. $x = -39$ |
| 5. $g = -1.8$ or $-1\frac{4}{5}$ | 6. $y = -24$ |              |              |

**Answers to Solving Equations III [Pg. 14]**

- |               |              |                        |             |             |
|---------------|--------------|------------------------|-------------|-------------|
| 1. $x = 3$    | 2. $t = -40$ | 3. $t = 11\frac{1}{5}$ | 4. $60 = x$ | 5. $t = 11$ |
| 6. $-384 = t$ | 7. $-9 = t$  | 8. $r = 7$             | 9. $x = 10$ |             |

**Answers to Equations - Variables on Each Side [Pg. 15]**

- |             |             |                        |
|-------------|-------------|------------------------|
| 1. $r = -5$ | 2. $t = 13$ | 3. $x = -8$            |
| 4. $y = -9$ | 5. $x = 2$  | 6. $p = 1\frac{3}{11}$ |

**Answers to Inequalities [Pg. 16]**

1.  $x > 2\frac{1}{4}$  : number line should have open circle at  $2\frac{1}{4}$  and extend to the right (positive values)
2.  $t \leq 3$  : number line should have closed circle at 3 and line extends to the left (into negative values)
3.  $x \geq 6$  : number line should have a closed circle at 6 and extend to the right.
4.  $x < -8$  : number line should have an open circle at  $-8$  and extend to the left

**Answers to Pythagorean Theorem [Pg. 17]**

- |              |                  |                   |                |
|--------------|------------------|-------------------|----------------|
| 1. $x = 4$ m | 2. About 5.66 ft | 3. $x = 15$ cm    | 4. $x = 13$ ft |
| 5. 25 in     | 6. About 14.14 m | 7. About 47.37 ft |                |

**Answers to Volume [Pg. 18]**

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|----------------------|---------------------------|------------------------|-----------------------|
| 1. $384 \text{ m}^3$ | 2. $1356.48 \text{ ft}^3$ | 3. $2000 \text{ in}^3$ | 4. $576 \text{ ft}^3$ |
|----------------------|---------------------------|------------------------|-----------------------|

**Answers to Surface Area [Pg. 19]**

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|----------------------|--------------------------|------------------------|-----------------------|
| 1. $352 \text{ m}^2$ | 2. $678.24 \text{ ft}^2$ | 3. $1000 \text{ in}^2$ | 4. $532 \text{ ft}^2$ |
|----------------------|--------------------------|------------------------|-----------------------|

**Answers to Problem Solving [Pg. 20]**

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|---------------|-----------------------|--------------|
| 1. \$1,747.97 | 2. \$112.00           | 3. 37        |
| 4. \$69.60    | 5. 45 degrees Celsius | 6. 30 inches |