

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.

Summer 2008

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. $\frac{2}{3}$, $\overline{0.6}$, $\overline{66.6\%}$ | 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]

- | | | | |
|----------------------|---------------------------|------------------------|-----------------------|
| 1. 384 m^3 | 2. 1356.48 ft^3 | 3. 2000 in^3 | 4. 576 ft^3 |
|----------------------|---------------------------|------------------------|-----------------------|

Answers to Surface Area [Pg. 19]

- | | | | |
|----------------------|--------------------------|------------------------|-----------------------|
| 1. 352 m^2 | 2. 678.24 ft^2 | 3. 1000 in^2 | 4. 532 ft^2 |
|----------------------|--------------------------|------------------------|-----------------------|

Answers to Problem Solving [Pg. 20]

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