

Chapter 11 Review

- $13x + 8$
- $-2b - 10$
- $4x + 15$
- $12x + 6$
- -22
- -3
- No
- Yes
- -5
- -16
- -7
- 2.3
- -24
- $\frac{5}{3}$
- 16
- 3
- $\frac{13}{7}$
- $\frac{26}{5}$
- -6
- 5
- The number is -4
- Molly is 14 years old and Kevin is 8 years old
- $135^\circ, 33.75^\circ, 11.25^\circ$
- 9 quarters, 25 nickels
- 29° and 61°
- The length is 17 cm and the width is 13 cm
- 14.5 m
- 59°F
- 227.5 miles
- 473.33 miles per hour

Chapter 11 Cumulative Review

- 5,044
- $\frac{23}{28}$
- 10.519
- $2\frac{1}{2}$
- 2,026,794
- 0.84
- 36
- $\frac{9}{14}$
- 540,000
- $\frac{9}{25}$
- $7\frac{5}{8}$
- 0.265
- 37%
- 19.8 lb
- $1\frac{9}{25}$
- 35%
- $\frac{5}{64}$
- $12x + 3$
- -9
- $-\frac{1}{3}$
- 5
- -3
- 42
- $-\frac{47}{18}$
- 6
- $\frac{1}{9}$
- 13
- 98 in^2
- Ben is 31, Ryan is 26
- 23 mpg
- \$140, 25%
- 5 m
- \$11.04
- \$32
- 60
- \$468
- 128
- 8,862, 18.33%
- 124,000; 44,000; $\frac{31}{11}$

Chapter 11 Test

- $10x - 5$
- $-2b + 3$
- $11x - 36$
- $5x + 13$
- -7
- -3
- No
- Yes
- -3
- 15
- 13
- 6.1
- -21
- $\frac{4}{3}$
- 18
- -8
- $\frac{1}{8}$
- 1
- -5
- 11
- The number is -9
- Susan is 27 years old and Karen is 24 years old
- $22.5^\circ, 45^\circ, 112.5^\circ$
- 4 quarters, 11 dimes
- 22.5° and 67.5°
- The length is 13 cm and the width is 7 cm
- 4.5 m
- 35°C
- 247.5 miles
- 506.40 miles per hour

Index

- A**
Absolute value, 473
Acute angle, 535
Addition
 associative property of, 16
 commutative property of, 15
 facts, 12
 of the opposite, 492
 property of equality, 543
 repeated, 42
 with carrying, 13
 with common denominators, 126
 with decimals, 185
 with fractions, 126, 128
 with mixed numbers, 151
 with negative numbers, 482
 with table, 12
 with unlike denominators, 128
 with whole numbers, 13
 with zero, 15
Addition property
 of equality, 543
 of zero, 15
Addition table, 12
Algebraic expression, 519, 532
 value of, 534
Angle, 535
 acute, 535
 complement of, 535
 complementary, 535
 measure, 535
 notation, 535
 obtuse, 535
 right, 223, 535
 sides of, 535
 straight, 535
 sum of (triangle), 569
 supplement of, 535
 supplementary, 535
 vertex of, 535
Area, 48
 metric units of, 353
 of a circle, 399
 of a parallelogram, 398
 of a rectangle, 49, 79, 398
 of a square, 49, 79, 398
 of a triangle, 106, 399
 U.S. units of, 352
Associative property
 of addition, 16
 of multiplication, 44
Average, 428, 429
 grade point, 205
 weighted, 205
Average speed, 579
Axis
 horizontal, 37
 vertical, 37
B
Bar chart, 37
Base, 67, 106
Batting average, 310
Blueprint for Problem Solving, 565
Borrowing, 26, 187
Box-and-whisker plot, 439
C
Carrying, 13
Celsius scale, 370
Chart
 bar, 37
 pie, 448
Circle
 area, 399
 circumference, 392
 diameter, 392
 radius, 392
Circumference, 392
Common denominators
 addition, 126
 subtraction, 126
Commission, 312
Commission rate, 312
Commutative property
 of addition, 5
 of multiplication, 44
Comparing fractions, 131, 170
Complementary angles, 535
Complex fraction, 161
Composite numbers, 94
Compound interest, 327
Cone, 416
 volume of, 416
Constant term, 557
Conversion factor, 341
 between metric and U.S.
 systems, 368, 369
 metric units of area, 353
 metric units of length, 342
 metric units of volume, 354
 metric units of weight, 363
 temperature, 370
 time, 375
 U.S. units of area, 352
 U.S. units of length, 342
 U.S. units of volume, 353
 U.S. units of weight, 362
Convert fractions to decimals, 212
Corresponding sides, 270
Counting numbers, 6
Cube, 67, 414
Cubic foot, 414
Cylinder, 408
 surface area, 408
 volume, 417
D
Decimal fractions, 177
Decimal notation, 176
Decimal numbers, 177
 addition with, 185
 converting fractions to, 212
 converting percents to, 287
 converting to fractions, 213
 converting to percents, 288
 division with, 201, 203
 expanded form, 177
 multiplication with, 193
 notation, 176
 point, 176
 rounding, 179
 subtraction with, 186
 writing in words, 177
Decimal point, 176
Degree, 370, 535
Degree measure, 535
Denominator, 83
 least common, 128
Diameter, 392
Diagram
 stem-and-leaf, 436
Difference, 24
 of negative numbers, 492
Digit, 2
Discount, 319
Distributive property, 44, 105, 532
Dividend, 57
Division
 by one digit numbers, 58
 by two digit numbers, 59
 by zero, 62
 long, 59
 property for fractions, 85
 with decimals, 201, 203
 with fractions, 85, 112, 121
 with mixed numbers, 145
 with negative numbers, 511
 with remainders, 61
 with whole numbers, 58, 61
Divisor, 57
E
Equations, 16, 251, 296, 542
 applications of, 565
 rate, 579
 in one variable, 557
Equally likely outcomes, 457
Equivalent fractions, 84
Estimating, 28
 decimals, 195
 differences, 36
 sums, 36
Evaluating formulas, 577
Event, 456
Expanded form, 3, 177
Experiment, 456
Exponents, 67
 one, 69
 zero, 69
Extremes, 257
F
Factor, 43
Factoring into prime numbers, 95
Fahrenheit scale, 370
Fibonacci sequence, 77
Five-number summary, 439
Formula, 577
Fraction bar, 57
Fractions, 83
 addition with, 126, 128
 and the number one, 85
 as ratios, 238
 bar, 57
 comparing, 131
 complex, 161
 converting decimals to, 213
 converting percents to, 288
 converting to decimals, 212
 converting to percents, 289
 decimal, 177
 denominator of, 83
 dividing, 112
 division property for, 85
 facts, 169
 equivalent, 84

- improper, 83
 - least common denominator, 128
 - lowest terms, 95
 - meaning of, 83
 - multiplication property for, 84
 - multiplying, 102
 - numerator of, 83
 - on the number line, 85
 - proper, 83
 - properties of 84, 85
 - reducing to lowest terms, 95
 - simplifying, 95, 103
 - subtraction with, 127, 128
 - terms of, 83
 - Frequency table, 437
 - Fundamental property of proportions, 258
- G**
- Geometric sequence, 56
 - Grade point average, 205
 - Graph
 - line, 86
- H**
- Height, 17
 - Histogram, 438
 - Horizontal axis, 37
 - Hypotenuse, 223
- I**
- Improper fractions, 83
 - Inequality, 473
 - Inequality symbols, 473
 - Inspection, 16
 - Integers, 474
 - Interest, 325
 - compound, 327
 - principal, 325
 - rate, 325
 - simple, 326
 - Irrational number, 222
 - Is, 566
- L**
- Labeling a triangle, 270
 - Large numbers, 3
 - Least common denominator, 128
 - Least common multiple, 128
 - Length,
 - metric units of, 342
 - U.S. units of, 341
 - Line graph, 86
 - Linear equations in one variable, 557
 - Long division, 59
 - Lowest terms, 95
- M**
- Mean, 429
 - Means, 257
 - Measure
 - of an angle, 535
 - of central tendency, 428
 - Median, 429
 - Metric system
 - converting to U.S. system, 368, 369
 - prefixes of, 342
 - units of area, 353, 354
 - units of length, 342
 - units of volume, 362
 - units of weight, 363
 - Mixed numbers, 137
 - addition with, 151
 - borrowing, 154
 - converting improper fractions to, 139
 - converting to improper fractions, 137
 - division with, 145
 - multiplication with, 144
 - notation, 137
 - subtraction with, 153
 - Mixed units, 375
 - Mode, 430
 - Multiplication
 - as repeated addition, 42
 - associative property of, 44
 - commutative property of, 44
 - of fractions, 102
 - property for fractions, 84
 - with decimals, 193
 - with mixed numbers, 144
 - with negative numbers, 502
 - with whole numbers, 42
 - Multiplication property
 - of equality, 549
 - of one, 44
 - of zero, 44
- N**
- Natural numbers, 6
 - Negative numbers, 472
 - addition with, 482
 - division with, 511
 - multiplication with, 502
 - subtraction with, 492
 - Notation
 - angle, 535
 - decimal, 176
 - mixed-number, 137
 - Number line, 6, 83, 472
 - Numbers
 - absolute value of, 473
 - composite, 94
 - counting, 6
 - decimal, 177
 - integer, 474
 - irrational, 222
 - large, 3
 - mixed, 137
 - negative, 472
 - opposite of, 474
 - positive, 472
 - prime, 94
 - rational, 169
 - rounding, 34, 179
 - whole, 6
 - writing in words, 4
 - writing in digits, 5
 - Numerator, 83
- O**
- Observed probability, 460
 - Obtuse angle, 535
 - Of, 105
 - Opposite, 474
 - addition of, 492
 - Order of operations, 69
 - with decimals, 196
 - Origin, 472
 - Outlier, 437
- P**
- Parallelogram
 - area of, 398
 - Percents
 - and commission, 312
 - and discount, 319
 - and sales tax, 311
 - applications, 305
 - basic percent problems, 296
 - converting decimals to, 288
 - converting fractions to, 289
 - converting to decimals, 287
 - converting to fractions, 288
 - increase and decrease, 318
 - meaning of, 286
 - solving problems using
 - equations, 296
 - proportions, 299
 - Perfect square, 221
 - Perimeter, 17
 - of a polygon, 17, 78, 390
 - of a rectangle, 17
 - of a square, 17
 - of a triangle, 17
 - Pi, 230, 392
 - Pie chart, 448
 - Place value, 2, 176
 - Polygon, 17, 390
 - Positive numbers, 472
 - Prime numbers, 94
 - Principal, 325
 - Probability, 456
 - observed, 460
 - theoretical, 457
 - Problem Solving,
 - Blueprint for, 565
 - Product, 43
 - Proper fractions, 83
 - Proportions, 257
 - applications, 264
 - extremes, 257
 - fundamental property of, 258
 - means, 257
 - terms of, 257
 - Protractor, 450
 - Pythagorean theorem, 223
- Q**
- Quartile, 439
 - Quotient, 57
- R**
- Radical sign, 220
 - Radius, 392
 - Range, 431
 - Rate equation, 579
 - Rates, 245
 - interest, 325
 - Ratio, 238
 - Rational number, 169
 - Reciprocal, 112, 121
 - Rectangle, 17
 - area, 49, 398
 - perimeter, 17
 - Rectangular solid
 - surface area, 407
 - volume, 415
 - Reducing
 - fractions, 95
 - to lowest terms, 94
 - Remainder, 61, 140
 - Repeated addition, 42
 - Right angle, 223, 535
 - Right circular cylinder
 - surface area, 408
 - volume, 417
 - Right triangle, 223
 - Roots
 - square, 220
 - spiral of, 224
 - Rounding
 - decimals, 179
 - whole numbers, 34

S

Sales tax, 311
 Sample space, 456
 Scatter diagram, 86
 Sequence
 Fibonacci, 77
 geometric, 56
 Set, 6, 428
 Sides of an angle, 535
 Sierpinski triangle, 218
 Similar figures, 270
 Similar terms, 519
 Similar triangles, 270
 Simple interest, 326
 Simplify fractions, 95
 Solution, 16
 to an equation, 542
 Speed
 average, 579
 Sphere
 surface area, 409
 volume, 416
 Spiral of roots, 224
 Square, 17
 area, 49, 398
 perfect, 221
 perimeter, 17
 Square inches, 48
 Square root, 220
 approximating, 222
 simplifying, 221
 Stem-and-leaf diagram, 436
 Straight angle, 535
 Subtraction
 with borrowing, 26, 187
 with common denominators, 126
 with decimals, 186
 with fractions, 126, 128
 with mixed numbers, 153
 with negative numbers, 492
 with unlike denominators, 128
 with whole numbers, 24
 Sum, 14
 of angles in a triangle, 569
 Supplementary angles, 535
 Surface area
 rectangular solid, 407
 right circular cylinder, 408
 sphere, 409

T

Table
 addition, 12
 frequency, 437
 Tax rate, 311
 Temperature, 370

Terms
 constant, 557
 of a fraction, 83
 of a proportion, 257
 reducing to lowest, 94
 similar, 519
 variable, 557
 Theoretical probability, 457
 Thirds, 83
 Time, 375
 Triangle, 17
 area, 106, 399
 labeling, 270
 perimeter, 17
 right, 223
 Sierpinski, 218
 similar, 270
 sum of angles in, 569

U

Unit analysis, 340
 Unit pricing, 246
 Units
 area, 352, 353
 length, 341, 342
 mixed, 375
 volume, 353, 354
 weight, 362, 363
 U.S. system of measurement, 340
 converting to metric
 system, 368, 369
 units of area, 352
 units of length, 341
 units of volume, 353
 units of weight, 362

V

Value of an algebraic expression, 534
 Variable, 15
 Variable term, 557
 Vertex of an angle, 535
 Vertical axis, 37
 Volume
 metric units of, 354
 of a cone, 416
 of a rectangular solid, 415
 of a right circular cylinder, 417
 of a sphere, 416
 U.S. units of, 353

W

Weight
 metric units of, 363
 U.S. units of, 362
 Weighted average, 205

Whole numbers, 6
 addition with, 13
 division with, 58, 61
 multiplication with, 42
 rounding, 34
 subtraction with, 24
 writing in words, 4
 Width, 17
 Writing numbers
 in words, 4
 with digits, 5

Z

Zero
 and addition, 15
 and division, 62
 and multiplication, 44
 as an exponent, 69