

- Faces, lateral**
 - of prism, 475
 - of pyramid, 482
- Fibonacci sequence**, 261
- Flow proofs**, 655–656
- Fractal Geometry**, 598, 684–691
- Fractions**, 237
- Fuller, R. Buckminster**, 505, 507
- Function**, 571
- Geodesic domes**, 505–506
- Geometry**
 - coordinate, 523–568, 660–669
 - elliptic, 234
 - Euclidean, 233–234
 - hyperbolic, 234
 - non-Euclidean, 233–234, 304
- Glide**, 583–584
- Glide reflection**, 584–585
- Golden rectangle**, 252, 253, 385
- Graph**
 - in discrete math, 676
 - of linear equation, 530, 548–550
 - of ordered pair, 113
- Great circle**, 234
- Group**, 616
- Half-turn**, 589, 602
- Hamilton circuit**, 678–681
- Hands-On Activities**
 - cutting, 104 (Ex. 7), 659 (Exs. 1–5)
 - model, 513
 - paper folding, 14 (Ex. 21), 20 (Ex. 27), 47 (Ex. 20), 96 (Exs. 16, 17), 135, 576 (Ex. 22), 612 (Ex. 16), 659 (Exs. 1–5), 660 (Exs. 8–9)
 - turning around a triangle, 658 (Ex. 4)
 - using paper, 179 (Ex. 1)
 - using a protractor, 21, 76 (Exs. 18–21), 99 (Ex. 33), 108 (Ex. 27)
- See also* Calculator Key-In, Computer Key-In, Constructions, and Explorations
- Height**
 - of cone, 491
 - of cylinder, 490
 - of parallelogram, 424
 - of prism, 475
 - of pyramid, 482
 - of rectangle, 424
 - of trapezoid, 435
 - of triangle, 244
- Heron's formula**, 434
- Hexagon**, 101
- Hypotenuse**, 141
- Hypothesis**, 33
- Icosahedron**, 506
- Identity transformation**, 605
- If and only if statement**, 34
- If-then statement**, 33–34, 208–209, 646–647
- Image**, 571
- Incenter**, 387
- Inductive reasoning**, 106
- Inequality(ies)**, 203–204
 - for one triangle, 219–221
 - properties of, 204
 - for two triangles, 228–229
- Inference, rules of**, 648
- Intercept**, 548
- Intersection**, 6
 - of geometric figures, 23
- Invariant**, 578
- Inverse**
 - of statement, 208
 - of transformation, 605–606
- Isometry**, 572, 601
- Isosceles triangle**, 93, 134–136
 - angles of, 134
 - base of, 134
 - legs of, 134
- Kite**, 193
- Koch curve**, 686–687, 690, 691
- Legs**
 - of isosceles triangle, 134
 - of right triangle, 141
 - of trapezoid, 190
- Length(s)**
 - of an arc, 452
 - proportional, 269–270
 - of a segment, 11–12
- Limit, area and circumference of circle defined as**, 446
- Line(s)**, 5, 23
 - auxiliary, 94
 - concurrent, 386
 - Euler's, 556, 563, 669
 - intersecting, 6, 23
 - parallel, 73, 78–79, 85, 177–179, 233–234, 270, 382, 538
 - slopes of, 535
 - parallel to plane, 73
 - perpendicular, 56, 85, 381
 - slopes of, 535
 - perpendicular to plane, 128
 - proving parallel, 83–85
 - of reflection, 577
 - skew, 73
 - slope of, 529–531, 535
 - of symmetry, 609, 659
- Linear equations**, 548
 - graphing, 530, 548–550
 - in one variable, 10, 13, 38
 - point-slope form, 553
 - slope-intercept form, 549
 - solving systems of, 69
 - standard form, 548
 - writing, 553–554
- Lobachevsky**, 234, 304
- Locus (Loc)**, 401–414
 - and construction, 410–411
 - intersection of, 405–406
- Logic**, 33–34, 208–209, 644–654
 - argument, valid, 649
 - compound statement, 644
 - conclusion, 33, 209
 - conditional(s), 33–34, 208–209, 646–647
 - conjunction, 644
 - contrapositive, 208, 647
 - converse, 33, 208, 647
 - counterexample, 33
 - disjunction, 644
 - and electrical circuits, 653–654
 - hypothesis, 33
 - if and only if statement (biconditional), 34, 647 (Ex. 20)
 - if-then statement, 33–34, 646–647
 - indirect proof, 214–215
 - inference, rules of, 648
 - inverse, 208
 - logical equivalence, 208
 - negation, 645
 - proofs in, 648–652
 - replacement, rules of, 651