Study Guide and Review

Study Guide

KeyConcepts

Points, Lines, and Planes (Lesson 1-1)

- There is exactly one line through any two points.
- There is exactly one plane through any three noncollinear points.

Distance and Midpoints (Lesson 1-3)

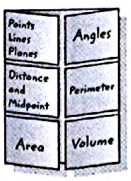
- On a number line, the measure of a segment with endpoint coordinates a and b is $|a - b|$.
- In the coordinate plane, the distance between two points (x_1, y_1) and (x_2, y_2) is given by $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.
- On a number line, the coordinate of the midpoint of a segment with endpoints a and b is $\frac{a + b}{2}$.
- In the coordinate plane, the coordinates of the midpoint of a segment with endpoints that are (x_1, y_1) and (x_2, y_2) are $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$.

Angles (Lessons 1-4 and 1-5)

- An angle is formed by two noncollinear rays that have a common endpoint, called its vertex. Angles can be classified by their measures.
- Adjacent angles are two coplanar angles that lie in the same plane and have a common vertex and a common side but no common interior points.
- Vertical angles are two nonadjacent angles formed by two intersecting lines.
- A linear pair is a pair of adjacent angles with noncommon sides that are opposite rays.
- Complementary angles are two angles with measures that have a sum of 90.
- Supplementary angles are two angles with measures that have a sum of 180.

FOLDABLES StudyOrganizer

Be sure the Key Concepts are noted in your Foldable.



KeyVocabulary

acute angle (p. 38)
adjacent angles (p. 46)
angle (p. 36)
angle bisector (p. 39)
area (p. 58)
base (p. 67)
between (p. 15)
circumference (p. 58)
collinear (p. 5)
complementary angles (p. 47)
concave (p. 56)
cone (p. 67)
congruent (p. 16)
construction (p. 17)
convex (p. 56)
coplanar (p. 5)
cylinder (p. 67)
degree (p. 37)
distance (p. 25)
edge (p. 67)
equiangular polygon (p. 57)
equilateral polygon (p. 57)
exterior (p. 36)
face (p. 67)
interior (p. 36)
intersection (p. 6)
line (p. 5)
line segment (p. 14)
linear pair (p. 46)
midpoint (p. 27)
n-gon (p. 57)
obtuse angle (p. 38)
opposite rays (p. 36)
perimeter (p. 58)
perpendicular (p. 48)
plane (p. 5)
Platonic solid (p. 68)
point (p. 5)
polygon (p. 56)
polyhedron (p. 67)
prism (p. 67)
pyramid (p. 67)
ray (p. 36)
regular polygon (p. 57)
regular polyhedron (p. 68)
right angle (p. 38)
segment bisector (p. 29)
side (p. 36)
space (p. 7)
sphere (p. 67)
supplementary angles (p. 47)
surface area (p. 69)
undefined term (p. 5)
vertex (pp. 36, 67)
vertex of a polygon (p. 56)
vertical angles (p. 46)
volume (p. 69)

VocabularyCheck

Fill in the blank in each sentence with the vocabulary term that best completes the sentence.

1. A _____ is a flat surface made up of points that extends infinitely in all directions.
2. A set of points that all lie on the same line are said to be _____.
3. If two lines intersect to form four right angles, the lines are called _____.
4. If the sum of the measures of two angles is 180, then the angles are called _____ angles.