



CHAPTER 1

Tools of Geometry



What You've Learned

California Content Standards

NS 1.2 Add, subtract, multiply, and divide rational numbers and take positive rational numbers to whole-number powers. *Grade 7*

MG 2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders. *Grade 7*

4.0 Students simplify expressions before solving linear equations and inequalities in one variable. *Algebra 1*



Check Your Readiness



for Help to the Lesson in green.

Squaring Numbers (Skills Handbook page 753)

Simplify.

1. 3^2

2. 4^2

3. 11^2

Simplifying Expressions (Skills Handbook page 754)

Simplify each expression. Use 3.14 for π .

4. $2 \cdot 7.5 + 2 \cdot 11$

5. $\pi(5)^2$

6. $\sqrt{5^2 + 12^2}$

Evaluating Expressions (Skills Handbook page 754)

Evaluate the following expressions for $a = 4$ and $b = -2$.

7. $\frac{a+b}{2}$

8. $\frac{a-7}{3-b}$

9. $\sqrt{(7-a)^2 + (2-b)^2}$

Finding Absolute Value (Skills Handbook page 757)

Simplify each absolute value expression.

10. $|-8|$

11. $|2 - 6|$

12. $|-5 - (-8)|$

Solving Equations (Skills Handbook page 758)



Algebra Solve each equation.

13. $2x + 7 = 13$

14. $5x - 12 = 2x + 6$

15. $2(x + 3) - 1 = 7x$