

Chapter 15 Review Questions



Studying for a chapter examination is a personal process, one which nobody else can do for you. Simply take the time to review what you have done. Here are the new terms in Chapter 15.

Abscissa [15.1]	First-degree equation [15.1, 15.4]	Probability function [15.5]
Analytic geometry [15.1]	Focus (pl. foci) [15.4]	Quadrant [15.1]
Axes [15.1]	Function [15.5]	Quadratic function [15.5]
Axis of a parabola [15.4]	Function machine [15.5]	Range [15.5]
Boundary [15.2]	Functional notation [15.5]	Satisfy [15.1]
Cartesian coordinate system [15.1]	General form [15.4]	Second-degree equation [15.4]
Center of a circle [15.4]	Graph [15.1, 15.3]	Slant asymptotes [15.4]
Center of an ellipse [15.4]	Half-plane [15.2]	Slope [15.1]
Center of a hyperbola [15.4]	Horizontal ellipse [15.4]	Slope-intercept form [15.1]
Circle [15.4]	Horizontal hyperbola [15.4]	Slope point [15.1]
Closed half-plane [15.2]	Horizontal line [15.1]	Solution [15.1]
Conic sections [15.4]	Hyperbola [15.4]	Standard form [15.3; 15.4]
Conjugate axis [15.4]	Independent variable [15.1]	Test point [15.2]
Coordinates [15.1]	Line [15.4]	Transverse axis [15.4]
Dependent variable [15.1]	Linear equation [15.1]	Vertex [15.3; 15.4]
Difference quotient [15.5]	Linear function [15.5]	Vertical ellipse [15.4]
Directrix [15.4]	Logarithmic function [15.5]	Vertical hyperbola [15.4]
Domain [15.5]	Major axis [15.4]	Vertical line [15.1]
Eccentricity [15.4]	Minor axis [15.4]	Vertical line test [15.5]
Ellipse [15.4]	Open half-plane [15.2]	x -intercept [15.1]
Exponential curve [15.3]	Ordinate [15.1]	y -intercept [15.1]
Exponential function [15.5]	Origin [15.1]	
	Parabola [15.3; 15.4]	

If you can describe the term, read on to the next one; if you cannot, then look it up in the text (the section number is shown in brackets). Next, study the types of problems listed at the end of Chapter 15.

TYPES OF PROBLEMS

- Graph lines by plotting points and by using the slope-intercept. [15.1]
- Draw a line when given a point and the slope. [15.1]
- Match a line with an equation. [15.1]
- Solve applied problems involving lines, including future value, depreciation, profit, marginal profit, cost, and marginal cost. [15.1]
- Graph first-degree inequalities with two unknowns. [15.2]
- Graph parabolas and exponential curves by plotting points. [15.3]
- Solve applied problems involving exponential and parabolic models. [15.3]
- Identify a conic section by looking at its equation. [15.4]
- Sketch a conic section using its geometric definition. [15.4]
- Sketch a conic section using its standard-form equation [15.4]
- Solve applied problems involving the conic sections. [15.4]
- Decide whether a given set is a function. [15.5]

Use the vertical line test to decide whether a given graph represents a functions. [15.5]

Determine the output value for a function. [15.5]

Evaluate functions. [15.5]

Graph a function and then classify it as a linear, quadratic, exponential, logarithmic, or probability function. [15.5]

Find $\frac{f(x+h) - f(x)}{h}$ for a given function f . [15.5]

Once again, see if you can verbalize (to yourself) how to do each of the listed types of problems.

Work all of Chapter 15 Review Questions (whether they are assigned or not). Work through all of the problems before looking at the answers, and *then* correct each of the problems. The entire solution is shown in the answer section at the back of the text. If you worked the problem correctly, move on to the next problem, but if you did not work it correctly (or you did not know what to do), look back in the chapter to study the procedure, or ask your instructor.

Finally, go back over the homework problems you have been assigned. If you worked a problem correctly, move on to the next problem, but if you missed it on your homework, then you should look back in the book or talk to your instructor about how to work the problem.

If you follow these steps, you should be successful with your review of this chapter.