8 Rational Functions

TEXAS

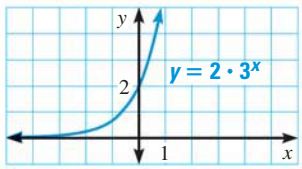
Before

In previous chapters, you learned the following skills, which you'll use in Chapter 8: writing direct variation equations, factoring polynomials, and performing polynomial operations.

Prerequisite Skills

VOCABULARY CHECK

1. The **asymptote** of the graph at the right is __?__.
2. Two variables x and y show **direct variation** provided __?__ where a is a nonzero constant.
3. An **extraneous solution** of a transformed equation is not an actual __?__ of the original equation.



SKILLS CHECK

The variables x and y vary directly. Write an equation that relates x and y. Then find the value of y when $x = -2$. *(Review p. 107 for 8.1.)*

4. $x = 2, y = 8$
5. $x = -1, y = 4$
6. $x = 12, y = 2$

Factor the polynomial completely. *(Review pp. 252, 353 for 8.4, 8.5.)*

7. $x^2 - 11x - 26$
8. $2x^3 - 4x^2 + 2x$
9. $6x^4 - 4x^3 - 24x + 16$

Perform the indicated operation. *(Review p. 346 for 8.4, 8.5.)*

10. $(3x^2 - 6) + (7x^2 - x)$
11. $(-2x^2 + 6) - (x^2 - x)$
12. $(x + 2)(x - 9)^2$

TEXAS @HomeTutor Prerequisite skills practice at classzone.com