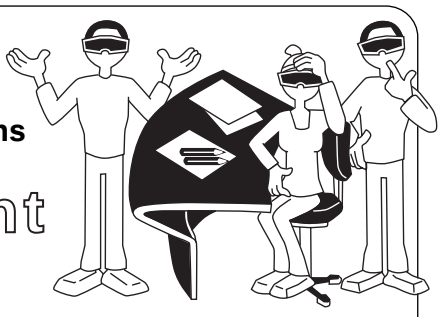
Name _____ Date _____

MASTERING ALGEBRA 1: Course 2
MODULE 4: Algebraic Expressions & Functions
UNIT 2: Rational Expressions, Equations & Functions



Unit Assessment

1. Find the excluded value(s) for each rational expression.

a. $\frac{6h - 2}{2h^2}$ _____

b. $\frac{4g}{3 + g}$ _____

c. $\frac{d + 2}{d - 2}$ _____

2. Simplify each expression.

a. $\frac{3w}{w - 2} \times \frac{2w + 6}{3w}$ _____

b. $\frac{2z}{z - 1} + \frac{3}{z + 1}$ _____

c. $\frac{4 - u}{12u} \div \frac{3}{u}$ _____

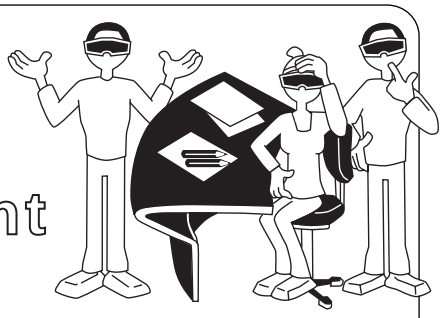
d. $\frac{8}{y + 2} - \frac{y + 3}{6}$ _____

3. Complete the table of values for the function $f(x) = \frac{2}{(x + 3)}$.

x	$f(x)$
−4	
−3	
−2	
−1	
0	
1	
2	
3	
4	

© RIVERDEEP, Inc.

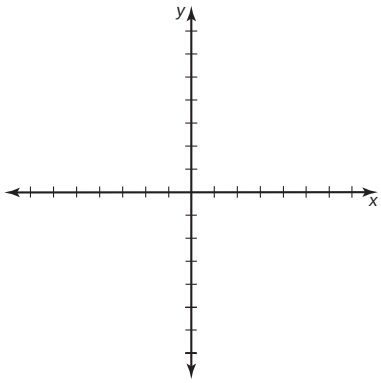
Name _____ Date _____



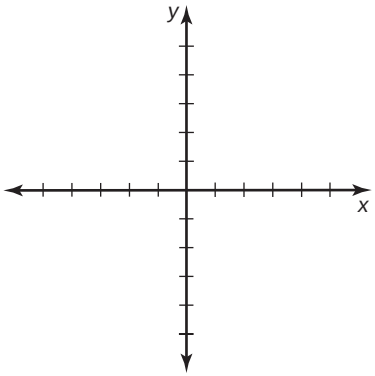
Unit Assessment

4. Graph each function.

a. $f(x) = \frac{2}{x-6}$



b. $f(x) = \frac{1}{x+1}$



5. A house painter can paint a room in 6 hours. If an assistant helps, the two can paint the room in 4 hours. How long would it take the assistant working alone to paint the room? _____

6. A runner leaves the gym and sets out on a training run at a rate of 6 miles per hour.

a. After half an hour, the runner increases to a rate of 8 miles per hour and runs for another 15 minutes. What is the total distance the runner travels?

_____

b. Suppose the runner maintains a steady rate of 6 miles per hour. The runner's coach leaves the gym on a bicycle 30 minutes after the runner leaves and catches up with the runner 15 minutes later. At what rate does the coach travel?

_____

c. If the coach leaves the gym one hour after the runner does and rides at the same rate as in part (b), how long will it take the coach to catch up with the runner?

_____

© RIVERDEEP, Inc.