Lesson 5.6 Practice: Variation and Rational Models

School Launch · Algebra II · Unit 5: Rational Expressions and Functions · Worksheet A

Calculator for decimals

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. y varies directly with x and inversely with z. When $x = 3$ and $z = 5$, $y = 3$. Find y when $x = 3$ and $z = 2$. EASY

2. y varies directly with x and inversely with z. When $x = 5$ and $z = 4$, $y = 10$. Find y when $x = 4$ and $z = 6$. EASY

3. y varies directly with x and inversely with z. When $x = 4$ and $z = 6$, $y = \frac{4}{3}$. Find y when $x = 9$ and $z = 4$. EASY

4. y varies directly with x and inversely with z. When $x = 5$ and $z = 6$, $y = \frac{15}{2}$. Find y when $x = 9$ and $z = 8$. MEDIUM

5. y varies directly with x and inversely with z. When $x = 3$ and $z = 2$, $y = 9$. Find y when $x = 3$ and $z = 9$. MEDIUM

6. y varies directly with x and inversely with z. When $x = 4$ and $z = 3$, $y = 12$. Find y when $x = 8$ and $z = 6$. MEDIUM

7. y varies directly with x and inversely with z. When $x = 4$ and $z = 2$, $y = 14$. Find y when $x = 3$ and $z = 2$. MEDIUM

8. y varies directly with x and inversely with z. When $x = 4$ and $z = 4$, $y = 11$. Find y when $x = 8$ and $z = 5$. HARD

9. y varies directly with x and inversely with z. When $x = 3$ and $z = 5$, $y = \frac{24}{5}$. Find y when $x = 9$ and $z = 4$. HARD

10. y varies directly with x and inversely with z. When $x = 3$ and $z = 4$, $y = \frac{15}{2}$. Find y when $x = 2$ and $z = 3$. HARD