# Practice Test for Rational Functions Unit

**Learning Objectives:**

1. Find the quotient of monomials.
2. Simplify expressions with negative exponents.
3. Graph rational functions using transformations.
4. Identify the asymptotes, domain, range and intercepts of a rational function.
5. Model a scenario using rational functions.
6. Simplify rational expressions.
7. Solve an equation with rational coefficients.
8. Solve rational equations.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question #** | **Learning Objective** | **Know It** | **Feel Unsure** |  | **Right** | **Wrong** | **Simple Mistake** | **Need to Study** |
| 1 | A |  |  |  |  |  |  |  |
| 2 | B |  |  |  |  |  |  |  |
| 3 | C |  |  |  |  |  |  |  |
| 4 | D |  |  |  |  |  |  |  |
| 5 | D |  |  |  |  |  |  |  |
| 6 | E |  |  |  |  |  |  |  |
| 7 | F |  |  |  |  |  |  |  |
| 8 | H |  |  |  |  |  |  |  |
| 9 | I |  |  |  |  |  |  |  |

1. 2. 3. Graph:

4. Identify the domain, range and intercepts of the function in #3.

5. Write a rational function that has no y-intercepts and exists only in the first and second quadrants.

6. To attend a power lifting class, you must pay $100 per year plus $3 per class.

a) What is the average cost per class if you attend 10 classes?

b) What is the average cost per class if you attend 50 classes?

c) Write a function that find the average cost C give classes attended x.

d) What is the domain of this function and what does it say about the scenario?

e) Another power lifting class offers classes for $6 each with no annual fee. Is this a better deal? Explain your

reasoning.

7. Simplify

8. Solve:

9. Solve: