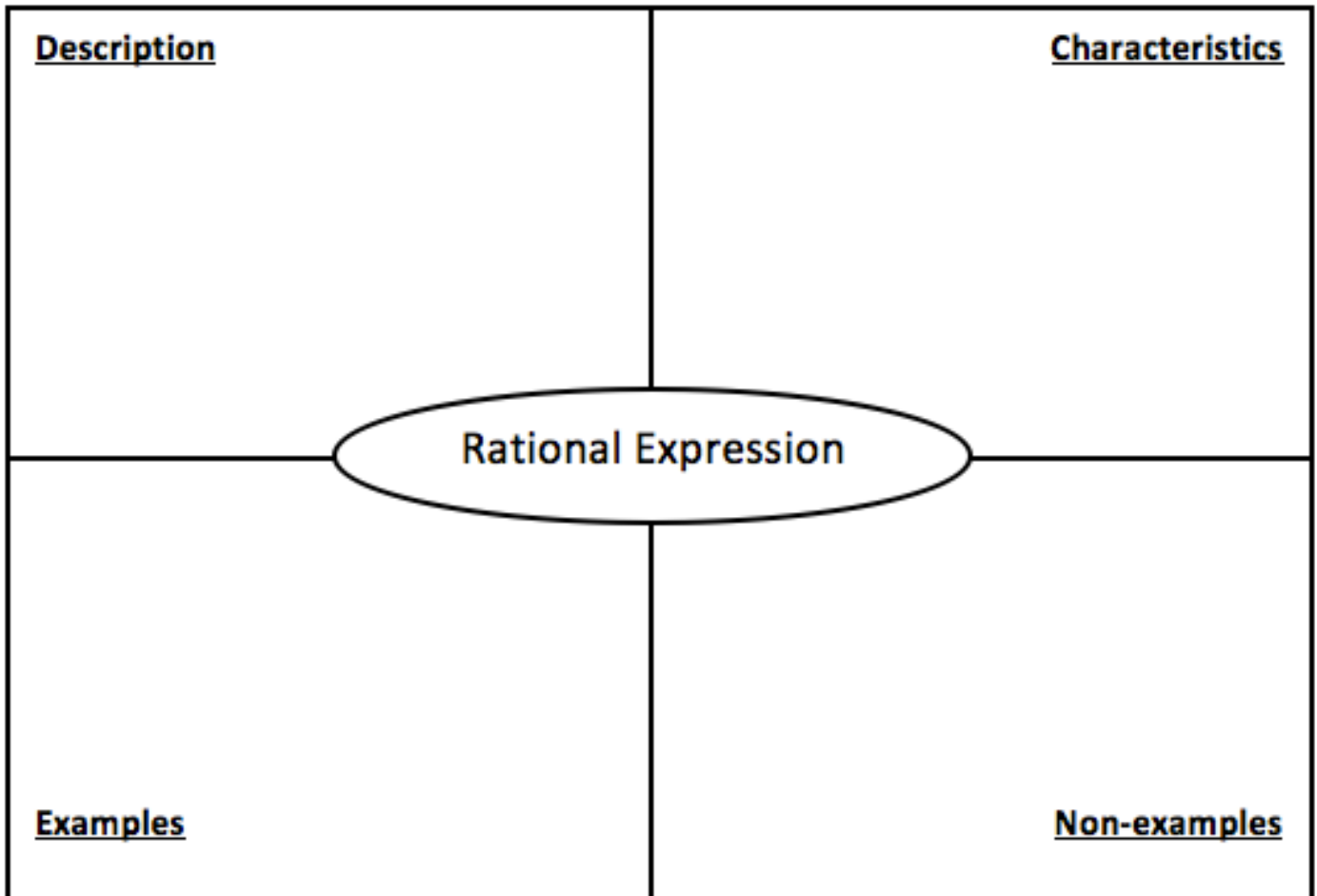


Which of the following are rational numbers, and which are not?

$$\frac{3}{4}, 3.14, \pi, \frac{5}{0}, -\sqrt{17}, 23, \frac{1+\sqrt{5}}{2}, -1, 6.022 \times 10^{23}, 0$$

Rational Numbers	Not Rational

Are all the numbers in the “not rational” box irrational?



• Simplifying Rational Expressions

My Attempt	Correct Work	Important Info
$\frac{15}{25}$		
$\frac{2x+4}{2x-6}$		
$\frac{5+5}{5+6}$		

• Steps in finding equivalent rational expressions in lowest terms (reducing):

Examples: Find an equivalent rational expression in lowest terms. Don't forget to state restrictions.

1. $\frac{16n}{20n}$

2. $\frac{x^3y}{y^4x}$

3.
$$\frac{(x+3)(x-2)}{(x-2)(2x+5)}$$

4.
$$\frac{x^2}{x(x-4)}$$

5.
$$\frac{(5x+6)(x-7)}{(5x-6)(x-7)}$$

6.
$$\frac{(x^2+3)(6x-7)}{(x+3)(6x+7)}$$

7.
$$\frac{(9+x)(3x-1)}{x(x-12)(x+9)}$$

8.
$$\frac{2n-8n^2}{4n}$$

9.
$$\frac{3n^2-5n-2}{2n-4}$$

10.
$$\frac{4x-2y}{3y-6x}$$

11.
$$\frac{x^2-9}{(x-3)^3}$$

12.
$$\frac{y-5}{y^2-y-20}$$

13. Write a rational expression with denominator $6b$ that is equivalent to $\frac{a}{b}$.

14. Write a rational expression with denominator $6b$ that is equivalent to $\frac{1}{3}$.

15. Simplify the following rational expression: $\frac{(x^2y)^2(xy)^3z^2}{(xy^2)^2yz}$

16. Simplify the following rational expression without using a calculator: $\frac{12^2 \cdot 6^3 \cdot 5^2}{18^2 \cdot 15}$