Date Completed: _____
Mentor Initials: _____

Fraction Clearing

Multiple Choice

1. $\frac{3}{x-9} - \frac{2}{x+9} = \frac{sx+r}{x^2-81}$

The equation above is true for all $x > 9$, where s and r are constants. What is the value of sr?

A) -18
B) 9
C) 27
D) 45

2. $\frac{3}{x+3} + \frac{2}{x-4} = \frac{sx+r}{(x+3)(x-4)}$

The equation above is true for all $x > 4$, where s and r are constants. What is the value of sr?

A) -30
B) -12
C) 0
D) 18

3. $\frac{1}{x+5} + \frac{3}{x-4} = \frac{sx+r}{(x+5)(x-4)}$

The equation above is true for all $x > 4$, where s and r are constants. What is the value of $s + r$?

A) -20
B) -15
C) 15
D) 20

4. $\frac{3s}{(x+3)^2} - \frac{2}{x+3} = \frac{-2x+9}{(x+3)^2}$

If the equation is true for all values of $x \neq -3$, what is the value of s?

A) -5
B) -3
C) 3
D) 5

5. $$\frac{3}{x+3}-\frac{2}{x-5}=\frac{50}{(x+3)(x-5)}$$

The equation above is true for all $x > 5$, what is the value of x?

A) 11
B) 31
C) 51
D) 71

Grid-In

6. If $\frac{5-4q}{(q-2)^2}+\frac{4}{(q-2)}=\frac{-a}{(q-2)^2}$, where $q \neq 2$, what is the value of a?

7. For what value of z is the expression $\frac{y+5}{y+2}-\frac{3y-1}{3y+6}$ equivalent to $\frac{z+1}{3y+6}$, where $y \neq -2$?

8. If $\frac{1}{x}-\frac{2}{2x+1}=1$, what is the value of x if $x > 0$?

9. $$\frac{2}{x+1}+\frac{5}{x-1}=\frac{24}{x^2-1}$$

If $x > 1$, what is the solution to the equation above?

10. If $\frac{xy+y}{x}=\frac{y}{x}+9$ for all values of x, what is the value of y?