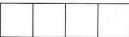
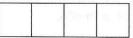
Exercise Set 5 (No Calculator)

If $\frac{1}{3} - \frac{1}{5} = \frac{y}{9}$, what is the value of y?



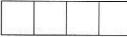
If $\frac{x}{x+1} + \frac{1}{x-1} = \frac{25}{24}$ and x > 0, what is the value of x?



If $\frac{1}{x-2} - \frac{1}{x+2} = \frac{8}{5}$, what is the value of x^2 ?



If $2 - \frac{1}{z} = -\frac{5}{6}$, what is the value of z?

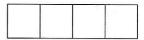


Let $g(x) = x^2 - 9x + 18$ and $h(x) = \frac{g(x)}{x - a}$, where a is a constant. If $h(4) = \frac{1}{12}$, what is the value of a?



If $\frac{1}{2x-2} - \frac{1}{2x+1} = \frac{a}{4x^2 - 2x - b}$ for all values of x

greater than 1, what is the value of a + b?



Which of the following is equivalent to $\frac{2}{1-x} + \frac{x}{x-1}$ for all x greater than 1?

A)
$$\frac{x+2}{x^2-1}$$

B)
$$\frac{x+2}{x-1}$$

C)
$$\frac{x-2}{x^2-1}$$

D)
$$\frac{x-2}{x-1}$$

For how many distinct integer values of n is $\frac{n+5}{n+2} > 2$?

- A) Zero B) One
- C) Two D) Three

If $a = \frac{1}{4}x$ and a > 1, which of the following is equivalent to $\frac{4(x-4)^2}{4x^2-64}$?

- D) $\frac{a^2-1}{a^2+1}$