

Name - _____

Start time - ___ : ___

End time - ___ : ___

Simplify the expressions.

a) $\frac{3x^2 - 3y^2}{12x - 12y} =$ _____

b) $\frac{(x+y)^2 - z^2}{x+y+z} =$ _____

c) $\frac{x^2}{x-y} \left(\frac{1}{x} - \frac{1}{y} \right) =$ _____

d) $\frac{xy}{x-y} \left(\frac{x}{y} - \frac{y}{x} \right) =$ _____

e) $\frac{a^2 - b^2}{c^2 - d^2} : \frac{b-a}{c+d} =$ _____

f) $\frac{3ab - 3a^2}{3a^2 - 6ab + 3b^2} =$ _____

g) $(a-b) \left(\frac{1}{a} - \frac{1}{b} \right) =$ _____

h) $(x-y) : \left(\frac{1}{x} + \frac{1}{y} \right) =$ _____

i) $(a^2 - b^2) \left(1 + \frac{a}{b} \right) =$ _____

j) $\frac{5a^2 - 5b^2}{25a^2 + 50ab + 25b^2} =$ _____

k) $\left(\frac{3}{1+a} - 1 \right) \left(\frac{3}{2-a} - 1 \right) =$ _____

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