1.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{x^2+5x+4}{x^2+1x-12}$
__ 2. $\frac{x^2+9x+18}{x^2+0x-9}$
__ 3. $\frac{x^2-3x-28}{x^2+10x+24}$

A. $\frac{x+1}{x-3}$
B. $\frac{x+6}{x-3}$
C. $\frac{x-7}{x+6}$

2.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{x^2-9}{x^3-27}$
__ 2. $\frac{x-3}{x^2+9} \cdot \frac{x+3}{x^2-9}$
__ 3. $\frac{x^2-9}{x^2+6x+9}$

A. $\frac{x-3}{x+3}$
B. $\frac{1}{x^2+9}$
C. $\frac{x+3}{x^2+3x+9}$

3.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{\frac{x^4}{x-10}}{\frac{x^6}{x^2-2x-80}}$
__ 2. $\frac{\frac{x^4}{x^2-2x-80}}{\frac{x^6}{x-10}}$
__ 3. $\frac{\frac{x^6}{x-10}}{\frac{x^4}{x^2-2x-80}}$
__ 4. $\frac{\frac{x^6}{x^2-2x-80}}{\frac{x^4}{x-10}}$

A. $\frac{x+8}{x^2}$
B. $\frac{x^2}{x+8}$
C. $\frac{1}{x^2(x+8)}$
D. $x^2(x+8)$

4.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{1}{x-6} - \frac{1}{x-2}$
__ 2. $\frac{1}{x+2} - \frac{1}{x+6}$
__ 3. $\frac{1}{x+6} + \frac{1}{x-2}$

A. $\frac{2x+4}{(x-2)(x+6)}$
B. $\frac{4}{(x+2)(x+6)}$
C. $\frac{4}{(x-2)(x-6)}$

5.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{1}{x-2} + \frac{1}{x^2-4}$
__ 2. $\frac{1}{x-2} - \frac{1}{x^2-4}$
__ 3. $\frac{1}{x-2} + \frac{1}{x^2+4}$

A. $\frac{x+1}{x^2-4}$
B. $\frac{x+3}{x^2-4}$
C. $\frac{x^2+x+2}{(x-2)(x^2+4)}$

6.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $y - \frac{x}{\frac{y}{x}+\frac{x}{y}}$
__ 2. $\frac{\frac{y}{x}-\frac{x}{y}}{\frac{1}{y^2}-\frac{1}{x^2}}$
__ 3. $\frac{y+\frac{y}{x-1}}{y-\frac{y}{x-1}}$

A. $-yx$
B. $\frac{y^3}{y^2+x^2}$
C. $\frac{x}{x-2}$

7.(1 pt) Match the expressions below with the letters labeling their equivalent expressions.
You must get all of the answers correct to receive credit.

__ 1. $\frac{\sqrt{s+h}+\sqrt{s}}{h}$
__ 2. $\frac{\sqrt{s+h}-\sqrt{s}}{h}$

A. $\frac{1}{\sqrt{s+h}+\sqrt{s}}$
B. $\frac{1}{\sqrt{s+h}-\sqrt{s}}$

8.(1 pt) Enter a T or an F in each answer space below to indicate whether the corresponding equation is true or false. An equation is true ony if it is true for all values of the variables. Disregard values that make denominators 0.

You must get all of the answers correct to receive credit.

__ 1. $\frac{x}{x+y} = \frac{1}{1+y}$
__ 2. $\frac{72+a}{72} = 1 + \frac{a}{72}$
__ 3. $\frac{72}{51+x} = \frac{72}{51} + \frac{72}{x}$
__ 4. $\frac{51}{51-c} = 1 - \frac{51}{c}$

9.(1 pt) Enter a T or an F in each answer space below to indicate whether the corresponding equation is true or false. An equation is true ony if it is true for all values of the variables. Disregard values that make denominators 0.

You must get all of the answers correct to receive credit.

__ 1. $\frac{30-34x+53x^2}{x} = \frac{30}{x} - 34 + 53x$

___ 2. $\frac{x^2-1}{x-1} = x+1$

___ 3. $\frac{-34a}{b} = -\frac{34a}{b}$

___ 4. $30\left(\frac{a}{b}\right) = \frac{30a}{30b}$