

**Practice Solving Rational Equations**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Solve the following rational equations algebraically. Identify any non-permissible values and reject any non-permissible values that appear as solutions.

a)  $\frac{x}{4} - \frac{x+3}{6} = \frac{x-3}{3}$

b)  $\frac{5}{2x} - \frac{7}{10x} = \frac{3}{x-2}$

c)  $\frac{x+3}{2x+1} = \frac{x+7}{5x+1}$

d)  $\frac{1}{x-3} - \frac{2}{x+4} = \frac{7}{x^2 + x - 12}$

2. A student taking part in a biathlon race was required to cycle for 80 km and then run for 10 km. On average the cycling speed was four times as fast as the average running speed. If the event was completed in five hours, find the athlete's average cycling speed in km/h. ( Use the back of the sheet )

Solutions: a) 2    b) -3    c) -4/3 , 1    d) no solution    2. 24km/hr