

$$\left[ \frac{3}{\underbrace{w^2 - w - 12}_{(w-4)(w+3)}} = \frac{w-1}{w-4} - \frac{1}{1} \right] \frac{(w-4)(w+3)}{1}$$

$$3 = (w-1)(w+3) - 1 \left[ \frac{(w-4)(w+3)}{w^2 - w - 12} \right]$$

$$3 = \cancel{w^2} + 2w - 3 - \cancel{w^2} + w + 12$$

$$3 = 3w + 9$$

$$w = -2$$

$$\frac{a}{a-5} - \frac{1}{a+2} = \frac{47}{(a-5)(a+2)}$$

$(a-5)(a+2)$

$$a(a+2) - 1(a-5) = 47$$

$$a^2 + 2a - a + 5 = 47$$

• Set =  
to  $\emptyset$

$$a^2 + a + 5 = 47$$

• Factor

$$\frac{a^2 + a - 42 = 0}{-47 \quad -47}$$

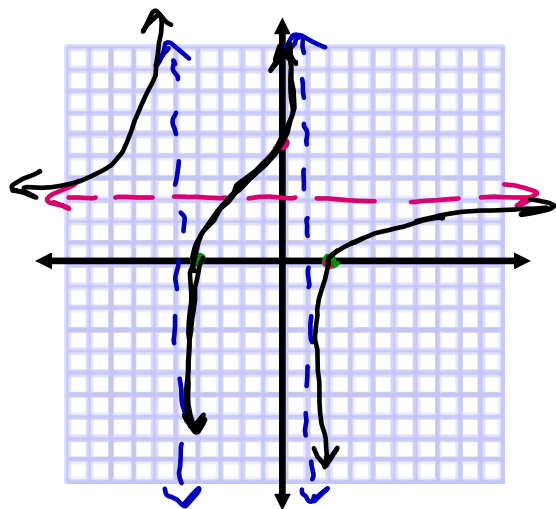
• Set each factor =  $\emptyset$

$$(a + 7)(a - 6) = 0$$

$$a + 7 = 0 \quad a - 6 = 0$$

• Solve

$$a = -7 \quad a = 6$$



$$\frac{(3x+12)(x-2)}{x^2+4x-5}$$

$$(x+5)(x-1)$$

$$\frac{(9)(-3)}{-8} =$$

X-int (set numerator to  $\emptyset$ )

$$3x+12=0$$

$$x=-4$$

$$x-2=0$$

$$x=2$$

y-int. (plug in 0 for  $x$ )

$$= \frac{-24}{-5}$$

V. A. = Excluded values  
(set denom. to  $\emptyset$ )

$$x+5=0 \quad x-1=0$$

H. A. = Based on Degree  $\frac{3x^2}{x^2} = \frac{3}{1}$