Multiply

① $2a^2-4a-16$

② $4a^2-21a+20$

③ $3a^2-a-44$

④ $12a^2+47a+11$.

$$\frac{2(a-4)(a+2)}{(4a-5)(a-4)} \cdot \frac{(3a+11)(a-4)}{(4a+1)(3a+11)}$$

$$\boxed{\frac{2(a-4)(a+2)}{(4a-5)(4a+1)}}$$

① $2a^2-4a-16$

$2(a^2-2a-8)$

$2(a-4)(a+2)$

② $4a^2-21a+20$

$(4a-5)(a-4)$

③ $3a^2-a-44$

$(3a+11)(a-4)$

④ $12a^2+47a+11$

$(4a+1)(3a+11)$

$t = \frac{d}{r}$

same

	rate	time	distance
up	$5-C$	$\frac{6}{5-C}$	6
down	$5+C$	$\frac{14}{5+C}$	14

B = 5mph

C = current

$$\frac{(5+C)(5-C)}{1}\cdot\frac{6}{5-C} = \frac{14}{5+C}\cdot\frac{(5+C)(5-C)}{1}$$

$$30+6C = 70-14C$$

$$\frac{20C}{20} = \frac{40}{20} \qquad C = 2$$

C = 2 mph

time alone

Sari = 120

Rilee = X

tog = X − 10

	rate · time = part		
Sari	$\frac{1}{120}$	$x-10$	$\frac{x-10}{120}$
Rilee	$\frac{1}{x}$	$x-10$	$\frac{x-10}{x}$
			1

$$\frac{120x}{1}\left(\frac{x-10}{120}\right)+\frac{120}{1}\left(\frac{x-10}{x}\right)=1\,\frac{120x}{1}$$

40 min

$$x(x-10)+120(x-10)=120x$$

$$x^2-10x+120x-1200=120x$$

$$x^2-10x-1200=0$$

$$(x-40)(x+30)=0$$

$x = 40$

$x \neq -30$

$$\frac{x(x-1)}{1}\cdot\frac{x+4}{x} - \frac{6}{x-1}\cdot\frac{x(x-1)}{1}$$

$$\frac{x(x-1)}{1}\cdot\frac{x+1}{x} + \frac{x-1}{x-1}\cdot\frac{(x)(x+4)}{1}$$

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

$$\frac{(x+4)(x+1)}{(2x-1)(x+1)}$$

$$\frac{(x-1)(x+4)-6x}{(x-1)(x+1)+x(x+1)} = \frac{x^2+3x-4-6x}{x^2-1+x^2+x}$$

$$\frac{x-4}{2x-1}$$