

4) Jill can paint a fence in eight hours. Stefan can paint the same fence in ten hours. How long would it take them if they worked together?

$$R \cdot T = W$$

	R	x	T	=	W
J	$\frac{1}{8}$		t		$\frac{t}{8}$
S	$\frac{1}{10}$		t		$\frac{t}{10}$

$$40 \left[\frac{t}{8} + \frac{t}{10} = 1 \right]$$

$$5t + 4t = 40$$

$$9t = 40$$

$$t = 4.44 \text{ hours}$$

1) Working together, Stefan and Daniel can sweep a porch in 5.32 minutes. Had he done it alone it would have taken Daniel 13 minutes. How long would it take Stefan to do it alone?

	R	x	T	=	W
S	$\frac{1}{x}$		5.32		$\frac{5.32}{x}$
D	$\frac{1}{13}$		5.32		$\frac{5.32}{13}$

$$13x \left[\frac{5.32}{x} + \frac{5.32}{13} = 1 \right]$$

$$13(5.32) + 5.32x = 13x$$

$$69.16 = 7.68x$$

$$9 = x$$

minutes