problems involving work/working together

ex.1 You mow a lawn in 40 min. When you work with a friend, you can mow the lawn in 24 min. How <u>long</u> would it take your friend to do?

	time (min)	in 1 min
You	40	$\frac{1}{40}$
FRIEND	t	$\frac{1}{t}$
TOGETHER	24	$\frac{1}{24}$

You + Friend = together

NPV $t \neq 0$
①CD
$(40)(24)(t)$
$= 960t$

$\frac{1}{40} \cdot \overset{24}{\cancel{960}t} + \overset{}{\underbrace{1 \cdot \cancel{960}t}_{t}} = \frac{1}{24} \cdot \overset{40}{\cancel{960}t}$

$24t + 960 = 40t$
$\quad -24t \qquad\qquad -24t$

$960 = 16t$

$60 \text{ } \underline{\text{min}} = t$

$\boxed{1 \text{ hour}}$

ex.2 p 596 #5 $| \; 1 \text{ hour} \; |$

ex.2 p...

spray → 3h | 1 hour
brush → ?? x | $\frac{1}{3}$
together | $\frac{1}{x}$
sp+b → 2h | $\frac{1}{2}$

spray + brush = together

NPV
x≠0
—
LCD
6x

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

$2x + 6 = 3x$

$6 \text{ h.} = x$

P 595 # 3, 6, 10
P 610 # 5