

October 10, 2012

**Section 6.6**

Work Problems

**Example 1**

Tom can paint a fence in 6 hours. Together Tom and Huck can paint the fence in 2 hrs. How long would it take for Huck to paint the fence by himself?

① look at the accomplishments of 1 hr.

Tom	6	Tom's part	+	Huck's part	=	together
Huck		in		in		in
together	2	1 hr		1 hr		1 hr.

$$\frac{1}{6} + \frac{1}{x} = \frac{1}{2}$$

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① LCD = 6x

$$\begin{array}{r} \cancel{x} + 6 = 3x \\ -\cancel{x} \quad -x \end{array}$$

$$\begin{array}{l} 6 = 2x \\ \boxed{3 = x} \end{array} \checkmark$$

so Huck 3 hrs.

## Example 2

Jan can type a report in 7 hours. It takes Mike 3 hrs. to type the same report. How long would it take if they worked together?

Jan	7
Mike	3
together	X

LCD = 21X

$$\frac{1}{7} + \frac{1}{3} = \frac{1}{X}$$

$$3X + 7X = 21$$

$$10X = 21$$

$$X = \frac{21}{10} \text{ hrs}$$

$$\boxed{2 \frac{1}{10} \text{ hrs}}$$

✓  
together