Solve each problem and check all solutions. Answer using a complete sentence.

1) A boat goes 240 miles downstream in the same time it can go 160 miles upstream. The speed of the current is 5 miles per hour. What is the speed of the boat in still water?

$$d = r \cdot t$$

	Distance	Rate	Time
Upstream	160	$r - 5$	t
Downstream	240	$r + 5$	t

$$\frac{160}{r-5} = \frac{240}{r+5}$$

$160r + 800 = 240r - 1200$

$-80r = -2000$

$\boxed{r = 25 \text{ mph}}$

2) A plane flies 910 miles with the wind in the same time it can go 660 miles against the wind. The speed of the plane in still air is 305 miles per hour. What is the speed of the wind?

$\boxed{W = 48.6 \text{ mph}}$

3) A person swims 11 miles downriver in the same time they can swim 7 miles upriver. The speed of the current is 4 miles per hour. Find the speed of the person in still water

$\boxed{r = 18 \text{ mph}}$

4) Kent can paint a certain room in 6 hours, but Kendra needs 4 hours to paint the same room. How long does it take them to paint the room if they work together?

$12\left(\dfrac{x}{6} + \dfrac{x}{4} = 1\right)$

$2x + 3x = 12$

$5x = 12$

$\boxed{x = 2.4 \text{ hrs}}$

5) Marco can build a lap top twice as fast as Cliff. Working together, it takes them 5 hours. How long would it have taken Marco working alone?

$\boxed{x = 7.5 \text{ hrs}}$

6) Susan drove 1500 miles to Daytona Beach for spring break. On the way back she averaged 10 mph less and the drive took her 5 hours longer. Find Susan's average speed on her trip to the beach.

$\boxed{r = 60 \text{ mph}}$