Rational Equation Word Problems (Motion and Working Together)

1) Dash can paddle a canoe 15 miles upstream in THE SAME AMOUNT OF TIME it takes Jenn to paddle a canoe 27 miles downstream. If the current is 2mph, what is Dash's speed paddling upstream?

3) Ashleigh can run 15 miles in the same amount of time it takes Erika to run 21 miles. If Erika runs 2 miles per hour faster than Ashleigh, how fast does Erika run?

5) A steamboat travels 246 miles upstream in the same amount of time the steamboat travels 294 miles downstream. If the speed of the current is 4mph, what would be the speed of the boat in still water?

7) A plane flies 960 miles with the wind in the same amount of time that the plane flies 640 miles against the wind. If the speed of the wind is 40mph, what would the speed of the plane be in still air?

2) A cruise ship traveled for 275 miles with the current in the same amount of time it traveled 175 miles against the current. The speed of the current was 10 mph.

What was the speed of the cruise ship while it traveled against the current?

4) A boat travels 165 miles downstream in the same time the boat travels 135 miles upstream. If the speed of the current is 5 mph, what would be the speed of the boat in still water?

6) The Goodyear blimp flies 153 miles with a tailwind in the same time it travels 57 miles with a headwind. If the speed of the wind is 16 mph, what is the speed of the blimp in still air?

8) A two-engine Cessna flew for 510 miles with a tailwind of 40 mph in the same amount of time that it flew for 330 miles with a headwind of 20 mph. What was the speed of the Cessna when it was traveling with a headwind?

9) John and Steve are working together to complete a painting job. John can complete the job in 3 hours by himself and Steve can complete the job in 5 hours by himself. How long will it take them to complete the job together?

10) Susan and Jessica are working together to complete designing a dress pattern for their Fashion Design class. Susan can complete the design in 8 hours by herself and Jessica can complete the design in 12 hours by herself. How long will it take them to complete the dress pattern together?

Answers:

1) Dash's speed upstream is 5 mph,

3) She runs at 7 mph,

5) The speed of the boat in still water is 45 mph,

7) The speed of the plane in still air is 200mph

2) The speed of the cruise ship was 35 mph.

4) The speed of the boat in still water is 50 mph.

6) The speed of the blimp in still air is 35 mph.

8) The speed of the plane with a headwind was 110 mph.

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