

Algebra 3 Assignment # 2

- (1) What number must be subtracted from both the numerator and the denominator of the fraction $1\frac{1}{23}$ to give a fraction whose value is $\frac{2}{5}$?
- (2) Working together, Amy and Julie can paint their room in 3 hours. If it takes Amy 5 hours to do the job alone, how long would it take Julie to paint the room working by herself?
- (3) A rope that is 20 feet long is cut into two pieces. The ratio of the smaller piece to the larger is $\frac{3}{5}$. Find the length of the shorter piece.
- (4) The denominator of a certain fraction is 1 more than the numerator. If the numerator is increased by $2\frac{1}{2}$ the value of the new fraction will be equal to the reciprocal of the original fraction. Find the original fraction.
- (5) Dan takes twice as long as George to complete a certain job. Working together, they can complete the job in 6 hours. How long will it take Dan to complete the job by himself?

Answers:

1. $x=3$
2. 7.5 hours
3. 7.5 feet
4. $\frac{2}{3}$
5. 9 hours