

Questions about Rational Numbers*

Please answer these questions T (true) or F (false)

1. The rational number $\frac{5x+2}{15}$ reduces to $\frac{x+2}{3}$
2. We can multiply fractions only if they have like denominators
3. $a \div b = \frac{1}{a} * b$ for any $a, b \neq 0$
4. One-half of one-third is one-sixth.
5. $\frac{x}{3} \div 2 = \frac{x}{6}$ for any x value
6. If 50 lbs of steak costs x dollars, then the price is $50/x$ dollars per pound.
7. $\frac{q}{b} \div \frac{b}{a} = 1$ for all non-zero values of a & b
8. $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$ for all a, b, c ... $b \neq 0$
9. The smallest common denominator for denominators 6 and 10 is 60.
10. $\frac{1}{2} + \frac{3}{4} = \frac{4}{6}$
11. $\frac{7}{a} + 3 = \frac{7+3a}{a}$
12. $\frac{a}{3} - \frac{w}{4} = \frac{4a-3w}{12}$
13. $\frac{3}{c} - \frac{2}{b} = \frac{2c-3b}{bc}$ for all non-zero b & c
14. The smallest common denominator for 2, x , and 6 is $6x$.
15. If Claudia drives m miles in 3 hours, then her speed was $x/3$ miles per hour.

* adapted from *Intermediate Algebra*, Mark Dugopolski, Addison-Wesley, 1991