Lesson 7:

For all equations:

If the equation has one solution, enter that answer.

If there is no solution to the equation, enter "none".

If all real numbers are solutions to the equation except for those value(s) that make the denominators zero, enter $x \neq a_{1,\ldots}$ For example, in #4, we get equations that look like $\frac{1}{2x-1} = \frac{4}{8x-4}$ (this is called an "identity," because we get the same thing on both sides after cross-multiplication) and thus all real numbers are solutions except for any number that makes any denominator zero (in this case, $\frac{1}{2}$). Enter this type of answer on the computer as $x \neq \frac{1}{2}$. If there are two values for which the denominator will be zero, enter as $x \neq \pm\frac{1}{2}$ or as $x \neq -\frac{1}{2}, x \neq \frac{1}{2}$. The plus/minus option is listed under the "log" menu. Do NOT enter as $x \neq -\frac{1}{2}, \frac{1}{2}$. Cengage Now cannot accept this format.

#1: If the fraction reduces, be sure to enter it in lowest terms.

#9: Directions: For what value of *c* is the number *a* a solution of the equation? This means that the number given solves the equation for x. Therefore, substitute the number in for *x* and solve the remaining equation for *c* to answer this question.

#10-#13: A problem such as "Solve $D - TQ = BQ + M$ for Q" means we want Q on its own side (left side, typically). So we start out by collecting Q's on the left side, everything on the other side. We solve this one the following way:

$$D - TQ = BQ + M$$

$$-BQ - TQ = M - D$$

$$Q(-B - T) = M - D$$

$$Q = \frac{M - D}{-B - T} = \frac{M - D}{-(B + T)} = \frac{-(M - D)}{B + T} = \boxed{\frac{D - M}{B + T}}$$

If the problem uses capitals letters, the answer must be inputted with capital letters. The same is true for lower case letters. They are case sensitive.