Two methods of solving an equation with fractions are shown below. Review both carefully and make sure you understand the steps.

Method 1: $\frac{x}{8}+\frac{1}{2}=2x-\frac{1}{3}$

|  |  |
| --- | --- |
| Convert all terms to have a common denominator | $$\frac{3x}{24}+\frac{12}{24}=\frac{48x}{24}-\frac{8}{24}$$ |
| Get like terms together. | $$\frac{3x}{24}+\frac{12}{24}+\frac{8}{24}=\frac{48x}{24}-\frac{8}{24}+\frac{8}{24}$$$$\frac{3x}{24}+\frac{20}{24}=\frac{48x}{24}$$$$\frac{3x}{24}-\frac{3x}{24}+\frac{20}{24}=\frac{48x}{24}-\frac{3x}{24}$$$$\frac{20}{24}=\frac{45x}{24}$$ |
| Multiply both sides by the denominator. | $$24∙\frac{20}{24}=\frac{45x}{24}∙24$$$$20=45x$$ |
| Divide by the coefficient of x. Simplify if necessary. | $$\frac{20}{45}=\frac{45x}{45}$$$$\frac{4}{9}=x$$ |

Method 2: $\frac{x}{8}+\frac{1}{2}=2x-\frac{1}{3}$

|  |  |
| --- | --- |
| Multiply all terms by the common denominator so that denominators cancel out. | $$24∙\frac{x}{8}+24∙\frac{1}{2}=24∙2x-24∙\frac{1}{3}$$$$3x+12=48x-8$$ |
| Get like terms together. | $$3x-3x+12=48x-3x-8$$$$12=45x-8$$$$12+8=45x-8+8$$$$20=45x$$ |
| Divide by the coefficient of x. Simplify if necessary. | $$\frac{20}{45}=\frac{45x}{45}$$$$\frac{4}{9}=x$$ |

Solve the equation below using both of the two methods shown above. Show enough of the steps that it is clear what method you are using.

|  |  |
| --- | --- |
| 1. Method 1: $4-\frac{x}{3}=\frac{2}{5}+\frac{10x}{2}$
 | 1. Method 2: $4-\frac{x}{3}=\frac{2}{5}+\frac{10x}{2}$
 |

Solve the following equations.

|  |  |
| --- | --- |
| 1. $\frac{.32}{9}=\frac{6}{x}$
 | 1. $\frac{5}{x}-8= \frac{1}{3}$
 |

**Complete the following problems from the textbook. p. 151: 49-52, 59, 60**