

Systems of Equations

Use the best method to solve each system of equations.

$$1) \quad \frac{2}{q} - \frac{3}{r} = -5 - \frac{8}{p}$$

$$\frac{4}{p} + \frac{6}{r} = \frac{5}{q} + 7$$

$$\frac{8}{q} - \frac{9}{r} = -12 + \frac{4}{p}$$

$$2) \quad -\frac{6}{a} = 14 - \frac{3}{b} - \frac{7}{c}$$

$$\frac{2}{c} + \frac{4}{a} = 44 + \frac{2}{b}$$

$$-\frac{3}{b} = \frac{8}{a} + 15 - \frac{1}{c}$$

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$$3) \quad -\frac{5}{t} - \frac{6}{u} = 38 + \frac{3}{s}$$

$$\frac{2}{s} - \frac{7}{t} + \frac{8}{u} - 18 =$$

$$\frac{1}{s} + \frac{8}{t} = -37 - \frac{4}{u}$$

$$5) \quad \frac{2}{s} - \frac{7}{t} = 23 + \frac{3}{r}$$

$$\frac{6}{r} = \frac{1}{s} - 15$$

$$-\frac{7}{t} = -\frac{4}{s} + \frac{9}{r} + 43$$

$$= 4bcd$$

$$= -11bcd$$

$$-7cd - 5bd + 2bc = -8bcd$$

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$$\left(-4, -\frac{1}{2}, -\frac{1}{2}\right)$$

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$$\frac{2}{s} - \frac{7}{t} + \frac{8}{u} - 18 =$$

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$$\left(-\frac{1}{7}, -\frac{1}{4}, -\frac{1}{5}\right)$$

$$5) \quad \frac{2}{s} - \frac{7}{t} = 23 + \frac{3}{r}$$

$$\frac{6}{r} = \frac{1}{s} - 15$$

$$-\frac{7}{t} = -\frac{4}{s} + \frac{9}{r} + 43$$

$$= 4bcd$$

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$$-7cd - 5bd + 2bc = -8bcd$$

$$\left(-\frac{3}{5}, \frac{1}{5}, -\frac{7}{8}\right)$$

$$\left(1, \frac{5}{6}, \frac{2}{5}\right) \text{ or } (0, 0, 0)$$