

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

**Determinants – Cramer's Rule**

DS1

Solve the following system of equation using Cramer's rule:

$$-\frac{x}{4} + \frac{y}{7} = \frac{4}{7}$$

$$\frac{x}{3} - \frac{y}{2} = \frac{1}{6}$$

$$\Delta = \boxed{\phantom{000}}$$

$$\Delta x = \boxed{\phantom{000}} \quad \Delta y = \boxed{\phantom{000}}$$

$$x = \boxed{\phantom{000}}$$

$$\frac{x}{3} + \frac{y}{5} = 6$$

$$\frac{x}{9} - \frac{y}{12} = -\frac{1}{4}$$

$$\Delta = \boxed{\phantom{000}}$$

$$\Delta x = \boxed{\phantom{000}} \quad \Delta y = \boxed{\phantom{000}}$$

$$= \boxed{\phantom{000}}$$

$$\frac{x}{10} + \frac{y}{3} = -\frac{3}{2}$$

$$-\frac{x}{5} + \frac{y}{6} = -2$$

$$\Delta = \boxed{\phantom{000}}$$

$$\Delta x = \boxed{\phantom{000}}$$

$$x = \boxed{\phantom{000}}$$

$$= \boxed{\phantom{000}}$$

$$= \boxed{\phantom{000}}$$

$$\frac{4x}{5} - \frac{7y}{4} = -\frac{5}{2}$$

$$\frac{x}{6} - \frac{y}{5} = \frac{7}{15}$$

$$\Delta = \boxed{\phantom{000}}$$

$$\Delta x = \boxed{\phantom{000}}$$

$$x = \boxed{\phantom{000}}$$

$$y = \boxed{\phantom{000}}$$

$$= \boxed{\phantom{000}}$$

$$x = \boxed{\phantom{000}}$$

$$y = \boxed{\phantom{000}}$$

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Answer key

**Determinants – Cramer’s Rule**

DS1

$$-\frac{x}{4} + \frac{y}{7} = \frac{4}{7}$$

$$\frac{x}{3} - \frac{y}{2} = \frac{1}{6}$$

$$\Delta = \frac{13}{168}$$

$$\Delta x = -\frac{13}{42}; \Delta y = \frac{13}{168}$$

$$x = \frac{\Delta x}{\Delta} = -4; y = \frac{\Delta y}{\Delta} = \frac{1}{4}$$

$$\frac{x}{3} + \frac{y}{5} = 6$$

$$\frac{x}{9} - \frac{y}{12} = -\frac{1}{4}$$

$$\Delta = -\frac{1}{20}$$

$$\Delta x = \frac{1}{9}; \Delta y = \frac{3}{20}$$

$$\frac{x}{10} + \frac{y}{3} = -\frac{3}{2}$$

$$-\frac{x}{5} + \frac{y}{6} = -2$$

$$\Delta = \frac{1}{12}$$

$$\Delta x = \frac{5}{12}; \Delta y = -\frac{1}{12}$$

$$x = \frac{\Delta x}{\Delta} = 5; y = \frac{\Delta y}{\Delta} = -1$$

$$\frac{4x}{5} - \frac{7y}{4} = -\frac{5}{2}$$

$$\frac{x}{6} - \frac{y}{5} = \frac{7}{15}$$

$$\Delta = \frac{79}{600}$$

$$\Delta x = \frac{79}{60}; \Delta y = \frac{19}{100}$$

$$x = \frac{\Delta x}{\Delta} = 10; y = \frac{\Delta y}{\Delta} = 6$$

$$\Delta x = -\frac{51}{14}; \Delta y = \frac{11}{21}$$

$$x = \frac{\Delta x}{\Delta} = -9; y = \frac{\Delta y}{\Delta} = 2$$

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