

Student Name: _____

Score: _____

Determinants – Cramer's Rule

Sheet 1

Identify the number of solutions using Cramer's rule:

$$4x + 3y = 11$$

$$5x + 2y = -6$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

$$5x - 2y = 6$$

$$7x - 3y = -4$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

$$8x + 6y = 4$$

$$4x + 3y = 2$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

$$3x + 6y = 7$$

$$4x + 8y = 5$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

$$3x + 4y = 1$$

$$9x + 12y = 3$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

$$7x - 4y = 5$$

$$6x + 9y = 4$$

$$\Delta = \boxed{}$$

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

Number of Solutions: _____

Student Name: _____

Score: _____

Answer key

Determinants – Cramer's Rule

Sheet 1

$$4x + 3y = 11$$

$$5x + 2y = -6$$

$$\Delta = -7 \neq 0$$

$$\Delta x = 40; \Delta y = -79$$

Number of Solutions: Unique

$$5x - 2y = 6$$

$$7x - 3y = -4$$

$$\Delta = -1 \neq 0$$

$$\Delta x = -26; \Delta y = -62$$

Number of Solutions: Unique

$$8x + 6y = 4$$

$$4x + 3y = 2$$

$$\Delta = 0$$

$$\Delta x = 0; \Delta y = 0$$

Number of Solutions: Infinite

$$3x + 6y = 7$$

$$4x + 8y = 5$$

$$\Delta = 0$$

$$\Delta x = 26 \neq 0; \Delta y = -13 \neq 0$$

Number of Solutions: None

$$3x + 4y = 1$$

$$9x + 12y = 3$$

$$\Delta = 0$$

$$\Delta x = 0; \Delta y = 0$$

Number of Solutions: Infinite

$$7x - 4y = 5$$

$$6x + 9y = 4$$

$$\Delta = 87 \neq 0$$

$$\Delta x = 61; \Delta y = -2$$

Number of Solutions: Unique