Student Name: _____ **Score:**

Determinants – Cramer's Rule

Sheet 1

Identify the number of solutions using Cramer's rule:

$4x+3y=11$
$5x+2y=-6$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$5x-2y=6$
$7x-3y=-4$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$8x+6y=4$
$4x+3y=2$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$3x+6y=7$
$4x+8y=5$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$3x+4y=1$
$9x+12y=3$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$7x-4y=5$
$6x+9y=4$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

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

Student Name: _____ Score:

Determinants – Cramer's Rule

Sheet 2

Identify the number of solutions using Cramer's rule:

$3x-4y=5$
$8x+3y=7$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Sol_____

$2x+3y=5$
$5x+6y=12$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

$8x-3y=4$
$-5x+7y=12$

$\Delta =$ ☐

$\Delta x =$ ☐

Number of Sol_____

$4x+3y=5$
$8x+6y=7$

$\Delta =$ ☐

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

$\Delta x =$ ☐ $\Delta y =$ ☐

Number of Solutions: _____

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Student Name: _____ Score:

Answer key

Determinants – Cramer's Rule

Sheet 2

$3x-4y=5$
$8x+3y=7$

$\Delta=41\neq 0$
$\Delta x=43;\Delta y=-19$
Number of So... Uni...

$2x+3y=5$
$5x+6y=12$

$\Delta=-3\neq 0$
$\Delta x=-6;\Delta y=-1$
... Unique

$8x-3y=4$
$-5x+7y=12$

$\Delta=41\neq 0$
$\Delta x=64;\Delta y=1$
Number of So...

... Infinite

$4x+3y=5$
$8x+6y=7$

$\Delta=0$
$\Delta x=9\neq 0;\ \Delta y$

... $1\neq 0$
Number of Solutions: None

Number of Solutions: None

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