NAME DATE PERIOD

Solving More Systems

Let's solve systems of equations.

Entrance Ticket: Number Talk: Solving Systems Mentally

Solve these without writing anything down:

$$\begin{aligned} x &= 5 \\ y &= x - 7 \end{aligned} \qquad \begin{aligned} y &= 4 \\ y &= x + 3 \end{aligned} \qquad \begin{aligned} x &= 8 \\ y &= -11 \end{aligned}$$

Activity 1: Challenge Yourself

Here are a lot of systems of equations:

A.

$$\begin{aligned} y &= 4x \\ x &= -5y + 6 \end{aligned}$$

B.

$$\begin{aligned} y &= 7 \\ x &= 3y - 4 \end{aligned}$$

C.

$$\begin{aligned} y &= \frac{3}{2}x + 7 \\ x &= -4 \end{aligned}$$

D.

$$\begin{aligned} y &= -3x + 10 \\ y &= -2x + 6 \end{aligned}$$

E.

$$\begin{aligned} y &= -3x - 5 \\ y &= 4x + 30 \end{aligned}$$

F.

$$\begin{aligned} y &= 3x - 2 \\ y &= -2x + 8 \end{aligned}$$

G.

$$\begin{aligned} y &= 3x \\ x &= -2y + 56 \end{aligned}$$

H.

$$\begin{aligned} x &= 2y - 15 \\ y &= -2x \end{aligned}$$

I.

$$\begin{aligned} 3x + 4y &= 10 \\ x &= 2y \end{aligned}$$

J.

$$\begin{aligned} y &= 3x + 2 \\ 2x + y &= 47 \end{aligned}$$

K.

$$\begin{aligned} y &= -2x + 5 \\ 2x + 3y &= 31 \end{aligned}$$

L.

$$\begin{aligned} x + y &= 10 \\ x &= 2y + 1 \end{aligned}$$

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1. Without solving, identify 3 systems that you think would be the least difficult to solve and 3 systems that you think would be the most difficult to solve. Be prepared to explain your reasoning.

2. Choose 4 systems to solve. At least one should be from your "least difficult" list and one should be from your "most difficult" list.

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Activity 2: Five Does Not Equal Seven

Tyler was looking at this system of equations:

$$x + y = 5 \qquad x + y = 7$$

He said,"Just looking at the system, I can see it has no solution. If you add two numbers, that sum can't be equal to two different numbers."

Do you agree with Tyler?

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