What's Going On?

Checking In	F.F.M.
Minds on	Quarters and Dimes
Action!	Making Equations
Consolidation	Symbols

Learning Goal - I will be able to solve problems involving linear systems.

Checking In

F.F.M.

Solve the system using elimination.

$4y = -12 - 7x$

$3x - 6y = -36$

$7x + 4y = -12$ (1)

$3x - 6y = -36$ (2)

(1) × 3

$21x + 12y = -36$ (3)

(2) × 2

$6x - 12y = -72$ (4)

$21x + 12y = -36$ (3)

$+\ 6x - 12y = -72$ (4)

$27x = -108$

$\frac{27x}{27} = \frac{-108}{27}$

$\boxed{x = -4}$

Substitute $x = -4$ into (1) or (2) and solve for y.

$7x + 4y = -12$ (1)

$7(-4) + 4y = -12$

$-28 + 4y = -12$

$+28 \qquad +28$

$4y = 16$

$\frac{4y}{4} = \frac{16}{4}$

$y = 4$

Checking In

Elimination or Substitution?

$x + y = 7$ (1)
$x - y = 11$ (2)

Rearrange (1) for x

$x + y = 7$
$-y \quad -y$
$x = 7 - y$

Substitute $x = 7 - y$ into (2)

$(7 - y) - y = 11$
$7 - y - y = 11$
$7 - 2y = 11$
$-7 \qquad -7$
$-2y = 4$
$\frac{-2y}{-2} = \frac{4}{-2}$
$y = -2$

$x + y = 7$
$+ \; x - y = 11$
$2x = 18$
$\frac{2x}{2} = \frac{18}{2}$
$x = 9$

Checking In

Elimination or Substitution?

$$y = 2x - 3$$

$$-\ y = -4x + 9$$

$$0 = 6x - 12$$

$$+12 \qquad +12$$

$$12 = 6x$$

$$x = 2$$

Checking In

Page 31 8.a

$$30\left(\frac{x}{6}-\frac{y}{5}\right)=(3)30 \quad 6\left(\frac{x}{3}-\frac{y}{2}\right)=(-3)6 \quad (1)$$

$$\frac{30x}{6}-\frac{30y}{5}=90 \qquad \frac{6x}{3}-\frac{6y}{2}=-18$$

$$5x-6y=90\ (4) \qquad 2x-3y=-18\ (3)$$

Minds on

Quarters and Dimes

I have a handful of quarters and dimes.

There are 12 coins in my hand totaling $1.35

How many quarters, how many dimes?

q represents # of quarters

d represents # of dimes

$$d + q = 12$$

$$0.10d + 0.25q = 1.35$$

or

$$10d + 25q = 135$$

$d + q = 12$ (1)

$10d + 25q = 135$ (2)

(1) $\times 10$

$10d + 10q = 120$ (3)

$-(10d + 25q = 135)$ (2)

$-15q = -15$

$\frac{-15}{-15} \quad \frac{-15}{-15}$

$q = 1$

Action!

Making Equations

A few of Mr. Gilbert's Grade 10 students decided to get together over Thanksgiving weekend and compare answers for the TIPS assignment. (they got caught of course)

The group sent Hope on a Tim Horton's run to get 6 coffees and 4 breakfast sandwiches. Hope lost the receipt but remembered that she spent $24.60 all together.

Elyse knows that a coffee and a breakfast sandwich comes to $5.25.

What is the price of a single coffee?
What is the price of a breakfast sandwich?

Consolidation

Homework

Page 36 - 37

ALL