p. 354

(19) $x = 1^{st}$ $y = 2^{nd}$

$x + y = 22$

$x - y = 12$

Algebra 1 6.4
Solve systems by elimination
Solve problems using
elimination
solve
elimination
DRT charts
whiteboards
speed dating (if time)

$2x - y = 4$ → $\times 3$ → $6x - 3y = 12$

$7x + 3y = 27$ → $7x + 3y = 27$

What is the plan?

$13x = 39$

$\frac{13x}{13} = \frac{39}{13}$

$x = 3$

$2 \cdot 3 - y = 4$

$6 - y = 4$

$-6 \quad -6$

$-y = -2$

$7 \cdot 3 + 3 \cdot 2 = 27$

$21 + 6 = 27$

$(3, 2)$ ☺

2. $2x + 7y = 1$
$x + 5y = 2$

$\xrightarrow{\cdot -2}$ $-2x - 10y = -4$

$2x + 7y = 1$

$-3y = -3$

$\frac{-3y}{-3} = \frac{-3}{-3}$

$y = 1$

$(-3, 1)$

$2x + 7 \cdot 1 = 1$

$2x + 7 = 1$

$-7 \quad -7$

$2x = -6$

$\frac{2x}{2} = \frac{-6}{2}$

$x = -3$

$-3 + 5 \cdot 1 = 2$

$-3 + 5 = 2$

3 $4x + 2y = -14$
$5x + 3y = -17$

4. $9a - 2b = -8$
$-7a + 3b = 12$

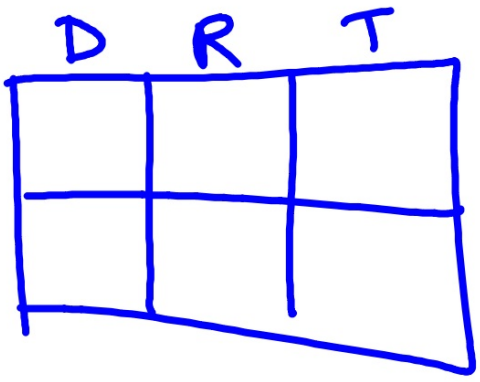
D = R * T

wind

current

upstream

downstream



against R - W

with R + W

B = ?

5. CCSS **SENSE-MAKING** A kayaking group with a guide travels 16 miles downstream, stops for a meal, and then travels 16 miles upstream. The speed of the current remains constant throughout the trip. Find the speed of the kayak in still water.

D = R · T

	D	R	T
with	16	B+C	2
against	16	B−C	4

$16 = (B+C)2$

$16 = (B-C)\cdot 4$

$16 = 2B+2C$ (−2)

$16 = 4B-4C$

Current = 2 mi/hr

boat = 6 mi/hr

$16 = (B+2)\cdot 2$

$16 = 2B+4$

$-4 \quad -4$

$12 = 2B$

$-32 = -4B+4C$

$16 = 4B-4C$

$-16 = -8C$

$\frac{-16}{-8} = \frac{-8C}{-8}$

$C = 2$

6.4 WB prac.

1-14, 17