

! DAILY QUEST

Subtract the polynomials.

$$1) (5x^2 - 13 + 8x) - (3x - 20 + 7x^2)$$

$$\boxed{5x^2} - \underline{13} \quad (+8x) \quad (-3x) + \underline{20} \quad \boxed{-7x^2}$$

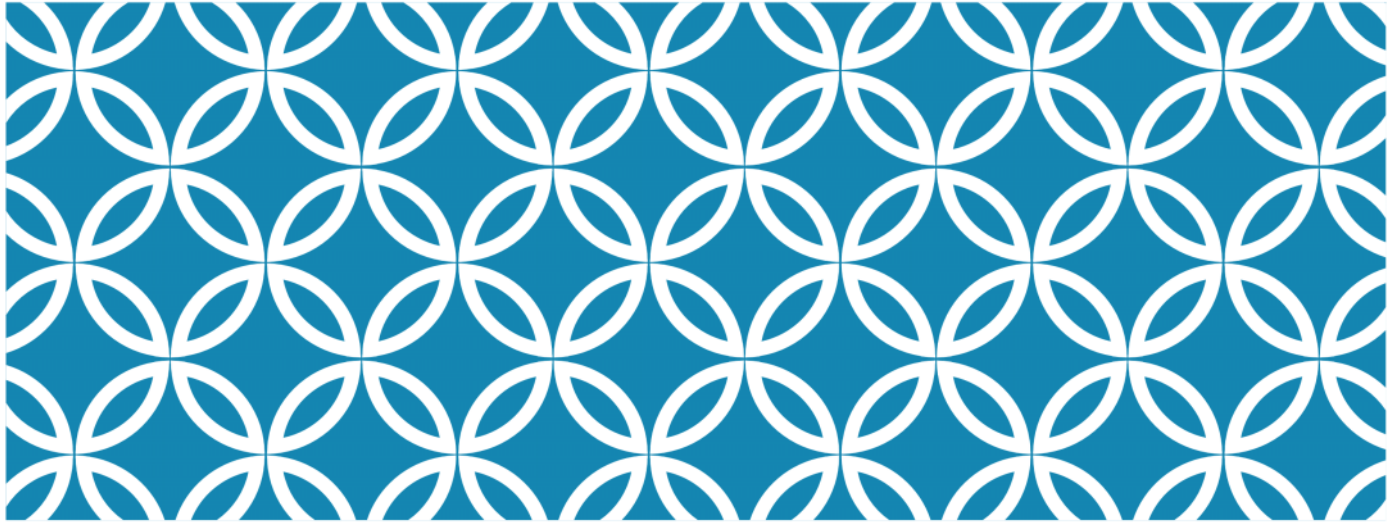
$$\boxed{-2x^2 + 5x + 7}$$

Multiply.

$$2) \overset{\text{Rows}}{(x + 5)} \overset{\text{columns}}{(2x - 3)}$$

| | | |
|-----|--------|-------|
| | $2x$ | -3 |
| x | $2x^2$ | $-3x$ |
| 5 | $10x$ | -15 |

$$\boxed{2x^2 + 7x - 15}$$



LESSON 4.1 SOLVE EQUATIONS

Goal: To solve equations/inequalities in math and real world context and to write rules for arithmetic sequence.

Obj: SWBAT solve equations.

PROBLEM 1:

Solve the equations.

$$\begin{array}{r} \downarrow \\ 3x - 5 = 37 \\ +5 \quad +5 \end{array}$$

$$\frac{3x}{3} = \frac{42}{3}$$

$$x = 14$$

$$\begin{array}{r} \downarrow \\ -103 = 7x - 5 \\ +5 \quad +5 \\ \hline -98 = 7x \\ \frac{-98}{7} = \frac{7x}{7} \end{array}$$

$$-14 = x$$

PROBLEM 2:

Solve the equations.

$$4 \left(\frac{-5+m}{4} \right) = 3 \cdot 4$$

$$\begin{array}{r} -5 + m = 12 \\ +5 \qquad \qquad +5 \\ \hline \end{array}$$

$$\boxed{m = 17}$$

$$\frac{1}{x} \cdot \frac{1}{\frac{1}{x}} = \frac{1}{1} = 1$$

$$9 + \frac{x}{10} = 8$$

$$\begin{array}{r} 90 + x = 80 \\ -90 \qquad \qquad -90 \end{array}$$

$$\boxed{x = -10}$$

PROBLEM 2A:

Solve the equations.

$$5 \cdot \frac{x+6}{5} = 3 \cdot 5$$

$$\begin{array}{r} x+6 = 15 \\ -6 \quad -6 \\ \hline \end{array}$$

$$x = 9$$

$$4 + \frac{x}{9} = 2$$

$$\begin{array}{r} 36 + x = 18 \\ -36 \quad -36 \end{array}$$

$$x = -18$$

PROBLEM 2B:

Solve the equations.

$$-5 = \frac{x}{12} - 12$$

$$-2 = \frac{-8+x}{9}$$

PROBLEM 3:

Solve the equations.

$$\underline{4x} + 2 + \underline{4x} = 18$$

$$\begin{array}{r} 8x + 2 = 18 \\ -2 \quad -2 \end{array}$$

$$\frac{8x}{8} = \frac{16}{8}$$

$$\boxed{x = 2}$$

$$3(6 - 6x) = -108$$

$$\begin{array}{r} +18 \\ -18 \end{array} - 18x = -108$$

$$\frac{-18x}{-18} = \frac{-126}{-18}$$

$$\boxed{x = 7}$$

PROBLEM 3A:

Solve the equations.

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

$+4$ $+4$

$$11 = 5x + 6$$

-6 -6

$$\frac{5}{5} = \frac{5x}{5}$$

$$1 = x$$

$$-4(5 - 3m) = -116$$
$$-20 + 12m = -116$$

$+20$ $+20$

$$\frac{12m}{12} = \frac{-96}{12}$$

$m = -8$

PROBLEM 3B:

Solve the equations.

$$-8 + 3x - 6x = -23$$

$$\begin{array}{r} -\cancel{8} - 3x = -23 \\ +\cancel{8} \qquad \qquad +\underline{8} \end{array}$$

$$\begin{array}{r} -3x = -15 \\ \underline{-3} \quad \underline{-3} \end{array}$$

$$\boxed{x = 5}$$

$$6(7x + 3) = -318$$

$$\begin{array}{r} 42x + \cancel{18} = -318 \\ -\cancel{18} \quad -\underline{18} \end{array}$$

$$\begin{array}{r} 42x = -336 \\ \underline{42} \quad \underline{42} \end{array}$$

$$\boxed{x = -8}$$

PROBLEM 3C:

Solve the equations.

$$19 = 7 + 7x - 2$$

$$-8(2 + 7x) = -296$$

PROBLEM 4:

Solve the equations.

$$-15 + 7x = 1 - x$$

PROBLEM 4A:

Solve the equations.

$$5 + 6x - 4x = 5x - 8 + 7$$

PROBLEM 4B:

Solve the equations.

$$-11 + 7x = 1 + 4x$$

PROBLEM 4B:

Solve the equations.

$$4 - 7x = -14 - 6x - 4x$$