

$$\textcircled{2} \quad \frac{4}{6b} - 1 + \frac{a}{a} = \frac{4}{6b} \div \frac{2}{2} = \frac{2}{3b}$$

$$\textcircled{3} \quad b - a = 1(a + b)$$

$$\textcircled{4} \quad \left[ \frac{a}{1} + (-1b) \right] = a - b$$

$$\textcircled{5} \quad -[1 - a - b] + 1 = -1 + a + b \quad (1)$$

$$\textcircled{2} \quad \begin{array}{l} x=7 \\ (-x+2) \\ -5 \end{array} + \begin{array}{l} x=10 \\ (-x+4) \\ -6 \end{array} = -11 \quad \begin{array}{l} -x+2 = -4 \\ x+3 = -6 \end{array} \quad \begin{array}{l} -x = -3 \\ x = -9 \end{array} \quad \textcircled{12+3}$$

$$\textcircled{3} \quad \begin{array}{l} x \\ 13 \end{array} + \begin{array}{l} (x+1) \\ 14 \end{array} + \begin{array}{l} (x+2) \\ 15 \end{array} = 42 \quad \begin{array}{l} x=13 \\ 3 \\ 12 \end{array}$$

$$\textcircled{4} \quad \begin{array}{l} a) \quad x \\ -3+2 \end{array} + \begin{array}{l} (x+2) \\ -3+4 \end{array} + \begin{array}{l} (x+4) \\ -3+4 \end{array} = -3 \quad x = -3$$

$$b) \quad -3 \quad -x \quad + \quad -$$

$$\begin{array}{r} -12 \\ -5 \\ \hline -10 \end{array}$$

## Week 2

### Do The Math Chapter 2

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①  $5hm^2k^3, 9hkm^3$  - <sup>a</sup>Alphabetical order  
 $5hk^3m^2, 9hkm^3$  - prime is 1  
-  $h$  to  $h = h$   
-  $k^3$  to  $k = k$   
-  $m^2$  to  $m^3 = m^2$   
 $= 1hkm^2$

②  $4a^2b, ab^2$  -  $4$  to  $1 = 1$   
-  $a^2$  to  $a = a$   
-  $b$  to  $b^2 = b$   
 $= ab$

③  $14x^3y^2, 28xy^2z$  -  $14$  to  $28 = 14$   
-  $x^3$  to  $x = x$   
-  $y^2$  to  $y^2 = y^2$   
-  $z$  to  $0 = 0$   
 $14xy^2$

④  $5g^2h^4, 15$  -  $5$  to  $15 = 5$   
 $= 5$

⑤  $ba^2b, 4ba^2$  -  $6$  to  $4 = 2$   
 $ba^2b, 4a^2b$  -  $a^2$  to  $a^2 = a^2$   
 $=$  -  $b$  to  $b = b$   
 $= 2a^2b$

## Do the Math

$$(1) \quad 15ab + 8c$$

$$1 \mid \underline{15ab \quad 8c}$$

$$15ab \quad 8c$$

$$1(15ab)(8c)$$

$$= 120abc$$

$$(2) \quad 7jk + jk^2$$

$$1 \mid \underline{7jk \quad jk^2} = JK - \text{GCF}$$

$$1(7jk)(jk^2)$$

$$= 7j^2k^3$$

$$(3) \quad 33m^2n + 22mn^2$$

$$11mn \mid \underline{3m \quad 2n} \quad \text{GFC} = 11mn$$

$$11mn(3m)(2n)$$

$$11mn(6mn)$$

$$= 66m^2n^2 - \text{LCM}$$

$$(4) \quad 4ab, 6a^2b, 9b$$

$$= 4ab \quad 6a^2b$$

$$2ab \mid \underline{2 \quad 3a} = \text{GFC} = 2ab$$

$$2ab(2)(3a)$$

$$2ab(6a)$$

$$12a^2b = \text{LCM}$$

$$12a^2b \quad 9b$$

$$3b \mid \underline{4a^2 \quad 3} \quad \text{GFC} = b$$

$$3b(4a^2)(3)$$

$$3b(12a^2)$$

$$= 36a^2b - \text{LCM}$$

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chapter 3

Week 2

- Do the Math

$$① 4e^2 - 5eh = e(4e - 5h)$$

$$② 2ab + 10b^2 = 2b(a + 5b)$$

$$③ 6c^2d - 7cd^2 = cd(6c - 7d)$$

$$\begin{aligned} ④ 7x + 2x &= x(7+2) \\ &= x(9) \\ &= 9x \end{aligned}$$

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$$\begin{aligned} ① 4e^2 - 5eh \\ e \overline{) 4e - 5h} \\ = e(4e - 5h) \end{aligned}$$

$$\begin{aligned} ② 15ab - 20b^2 \\ 5b \overline{) 3a - 4b} \\ = 5b(3a - 4b) \end{aligned}$$

$$\begin{aligned} ③ 6c^2d - 7cd^2 \\ cd \overline{) 6c - 7d} \\ = cd(6c - 7d) = 6 \end{aligned}$$

$$\begin{aligned} ④ 7x + 2x \\ x \overline{) 7+2} \\ = x(7+2) \\ = x(9) \\ = 9x \end{aligned}$$

WK 2

Chapter 3

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$$\begin{array}{l} \textcircled{2} \quad 15ab - 20b^2 \\ \quad \quad 5b \overline{) 3a - 4b} \\ \quad \quad 5b(3a - 4b) \end{array}$$

$$\begin{array}{l} \textcircled{4} \quad 12b^2cd - 18bcd + 24bd \\ \quad \quad 6bd(2bc - 3c + 4) \end{array}$$

$$\begin{array}{l} \textcircled{3} \quad 12b^2cd - 18bcd \\ \quad \quad 6bcd(2b - 3) \end{array}$$

$$\begin{array}{l} \textcircled{5} \quad x^2y^2 + x^2y + xy^2 - xy \\ \quad \quad xy(xy + x + y - 1) \end{array}$$



$$\textcircled{1} \quad -\frac{x}{2} \div \frac{34}{5x}$$

$$= -\frac{x}{2} \times \frac{5x}{34} = \frac{(-x)(5x)}{(2)(34)} = \frac{-5x^2}{64}$$

$$\textcircled{2} \quad \frac{a}{b} \div \frac{2}{c}$$

$$= \frac{a}{b} \times \frac{c}{2} = \frac{(a)(c)}{(b)(2)} = \frac{ac}{2b}$$

$$\textcircled{3} \quad \frac{2}{c} \div \frac{a}{b}$$

$$= \frac{2}{c} \times \frac{b}{a} = \frac{(2)(b)}{(c)(a)} = \frac{2b}{ac}$$

$$\textcircled{4} \quad \frac{3ef}{4} \div \frac{5}{e} =$$

$$= \frac{3ef}{4} \times \frac{e}{5} = \frac{(3ef)(e)}{(4)(5)} = \frac{3e^2f}{20}$$

$$\textcircled{5} \quad 10 \div n$$

$$= \frac{10}{1} \times \frac{1}{n} = \frac{(10)(1)}{(1)(n)} = \frac{10}{n}$$

$$\begin{aligned} \textcircled{1} \quad \frac{7x - 7y}{y - x} &= \frac{7(x - y)}{y - x} \\ &= \frac{7(-1)(-1)(x - y)}{y - x} \\ &= \frac{7(-1)(-x + y)}{y - x} \\ &= \frac{-7(-1)(y - x)}{y - x} = \frac{-7(y - x)}{y - x} \\ &= -7 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad \frac{9ab - 3b}{6b + 3bc} &= \frac{3b(3a - 1)}{3b(2 + c)} \\ &= \frac{3a - 1}{2 + c} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad \frac{15xy + 5x}{5x} &= \frac{5x(3y + 1)}{5x} \\ &= 3y + 1 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \frac{11cd - 11d}{7c - 7} &= \frac{11d(\cancel{c} - 1)}{7(\cancel{c} - 1)} \\ &= \frac{11d}{7} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad \frac{8a - 4b}{b - 2a} &= \frac{-4(2a + b)}{b(-1)(-1)(-2a)} \\ &= \frac{-4(2a + b)}{b(-1)(-2a)} \\ &= \frac{-4(2a + b)}{2a + b} \\ &= -4 \end{aligned}$$

## Week 2 - Chapter 5

$$\begin{aligned} \textcircled{2} \quad \frac{x}{5} + \frac{2x}{5} &= \frac{x+2x}{5} \\ &= \frac{3x}{5} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad \frac{x}{y} + \frac{2x}{y} &= \frac{x+2x}{y} \\ &= \frac{3x}{y} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \frac{1}{b} - \frac{a+1}{b} &= \frac{1-(a+1)}{b} \\ &= \frac{1-a-1}{b} \\ &= \frac{-a}{b} \end{aligned}$$



Week 2 Ch.5 (pg 65)

$$\textcircled{2} \quad \frac{1}{2a} + \frac{3}{a} = \frac{1+6}{2a} = \frac{7}{2a}$$

$$\textcircled{3} \quad \frac{1}{3} + \frac{2}{v} = \frac{v+6}{3v}$$

$$\textcircled{4} \quad \frac{1}{n} + \frac{1}{1-n} = \frac{1-n+n}{n(1-n)} = \frac{1}{n(1-n)}$$

$$\textcircled{5} \quad x - \frac{1}{y} = \frac{xy-1}{y}$$

$$\textcircled{6} \quad \frac{a}{6b} + \frac{1}{2a} + \frac{c}{4ab} = \frac{2a^2 + 6b + 3c}{12ab}$$

$$\textcircled{7} \quad \frac{7}{2(y-1)} + \frac{1}{2y} = \frac{7y + y - 1}{2y(y-1)}$$
$$= \frac{8y - 1}{2y(y-1)}$$

Week 2 Ch 5 pg 69

$$\textcircled{2} \quad \frac{\frac{3}{x} + \frac{x}{3}}{\frac{1}{3x}} = \frac{\frac{9+x^2}{3x}}{\frac{1}{3x}} = \frac{3x(9+x^2)}{3x} = 9+x^2$$

$$\textcircled{3} \quad \frac{1}{\frac{1}{c} + \frac{1}{d}} = \frac{1}{\frac{1}{c} + \frac{1}{d}} = \frac{1}{\frac{d+c}{cd}} = \frac{1}{1} \cdot \frac{cd}{d+c} = \frac{cd}{d+c}$$

$$\begin{aligned} \textcircled{4} \quad \frac{\frac{3b}{4a} - \frac{b}{2a}}{\frac{b}{3a}} - \frac{3}{4} &= \frac{\frac{6b-4b}{8a}}{\frac{b}{3a}} - \frac{3}{4} \\ &= \frac{2b}{8a} \cdot \frac{3a}{b} - \frac{3}{4} \\ &= \frac{8a(2b)}{3a(b)} - \frac{3}{4} \\ &= \frac{16ab}{3ab} - \frac{3}{4} \\ &= \frac{4(16ab) - 3(3)}{12} = \frac{64ab - 9}{12} \end{aligned}$$

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