

April 27, 2016

#15)  $x^2(40 + \frac{6}{x} = \frac{1}{x^2})$

$$40x^2 + 6x = 1$$

$$40x^2 + 6x - 1 = 0 \quad ac = -40 \quad b = 6$$

$$40x^2 + 10x - 4x - 1 = 0 \quad \frac{+}{10} \mid \frac{+}{4}$$

$$10x(4x+1) - 1(4x+1) = 0$$

$$(4x+1)(10x-1) = 0$$

①  $4x+1=0$   
 $4x = -1$   
 $x = -\frac{1}{4}$

②  $10x-1=0$   
 $10x = 1$   
 $x = \frac{1}{10}$

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#2)  $x(x = 7 + \frac{60}{x})$

$$x^2 = 7x + 60$$

$$x^2 - 7x - 60 = 0 \quad ac = -60 \quad b = -7$$

$$x^2 - 12x + 5x - 60 = 0 \quad \frac{-}{12} \mid \frac{+}{5}$$

$$x(x-12) + 5(x-12) = 0$$

$$(x-12)(x+5) = 0$$

①  $x = 12$

②  $x = -5$

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$$-x^2 + 4x + 21 = 0$$

$$0 = x^2 - 4x - 21 \quad ac = -21 \quad b = -4$$

$$0 = x^2 - 7x + 3x - 21 \quad \frac{+}{7} \mid \frac{+}{3}$$

$$0 = x(x-7) + 3(x-7)$$

$$0 = (x-7)(x+3)$$

①  $x = 7$

②  $x = -3$

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$\frac{1}{a} + \frac{1}{b} = \frac{1}{x}$ ; for  $x$

$$bx + ax = ab$$

$$\frac{x(b+a)}{(b+a)(b+a)} = \frac{ab}{(b+a)}$$

$$x = \frac{ab}{b+a}$$

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24  $C = \frac{D(A+1)}{24}$ ; for  $A$

$$24C = D(A+1)$$

$$24C = D \cdot A + D$$

$$\frac{24C - D}{D} = \frac{D \cdot A}{D}$$

$$\frac{24C - D}{D} = A$$

$\frac{24C = D(A+1)}{D} = \frac{D(A+1)}{D}$

$\frac{24C}{D} = A+1$

$\frac{24C}{D} - 1 = A$

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$$\frac{24C - D}{D} = \frac{24C}{D} - 1$$

$$\frac{24C}{D} - 1 = \frac{24C - D}{D}$$

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$$\frac{24c - 2}{2}$$

$$\frac{24c}{2} - \frac{2}{2}$$

$$\frac{24c}{2} - 1$$

$$\frac{a+c}{b} = \frac{a}{b} + \frac{c}{b}$$

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$$\frac{24c}{2} - \frac{1}{1}$$

$$\frac{24c - 2}{2}$$

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