

MAGDY BKHEET

NO-2007446

03/11/2020

(1) $x^4 \times x^6 \times x$ $\therefore 4+6+1$
 $4+6+1$
 $10x+1 = 11$

(2) $2x^2 \times 3x^3 \times 2x$
 $2x^5 \times 3 \times 2x$
 $2x^6 \times 3 \times 2$
 $6x^6 \times 2 = 12x^6$

(3) $\frac{x^4 \times x^3 \times x^2}{9}$ $\frac{x^4 + x^3 + x^2}{9}$
 $\frac{7x^2}{9}$
 $\therefore x = \frac{9}{7}$

(4) $(3x^2)^3$
 $3(x^2)^3 \times 27(x^2)^3$
 $27x^2 \times 3 \times 27x^6$

(5) $\sqrt{x} \times \sqrt{x}$
 $(\sqrt{x})^2 \therefore = x$

Linear equations

(1) $15x - 2 = 12x + 9$
 $15 - 12x = 9 + 2$
 $\therefore 3x = 11$
 $\therefore x = \frac{11}{3}$

(2) $3(7x - 1) = 6(x + 3)$
 $21x - 3 = 6(x + 3)$
 $21x - 3 = 6x + 18$
 $21x - 3 - 6x = 18$
 $15x - 3 = 18$
 $15x = 18 + 3$
 $15 = 21$
 $x = \frac{21}{15}$
 $x = \frac{7}{5}$

(3) $\frac{5x+3}{4} = \frac{2x-1}{9}$
 $9(5x+3) = 4(2x-1)$
 ~~$45x+27 = 8x-4$~~
 $45x + 27 = 8x - 4$
 $45x + 27 - 8x = -4$
 $37x + 27 = -4$
 $37x = -4 - 27$
 $37x = -31$
 $x = \frac{-31}{37}$
 $\therefore x = -0.837$

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Quadratic equations

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(1)

$$x^2 + 10x + 21 = 0$$

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

$$\therefore x = -7 \quad x = -3$$

find the Two solutions of following quadratic equations

$$(1) \quad 14x^2 + 3x = 11$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-3 \pm \sqrt{9 + 616}}{56}$$

$$x = \frac{-3 \pm \sqrt{625}}{56}$$

$$\therefore x = \frac{-3 \pm 25}{56}$$

$$x = \frac{-3 + 25}{56}$$

$$\therefore x = \frac{-3 + 25}{56} \quad \therefore x = 0.39$$

$$x = \frac{-3 - 25}{56} \quad \therefore x = \frac{-28}{56}$$

$$\therefore x = -0.5$$

(2)

$$x^2 - 3x + 2 = 0$$

$$(x-1)(x-2)$$

$$x-1=0 \quad x-2=0$$

$$\therefore x = 1 \quad \therefore x = 2$$

(3)

$$x^2 + 12x + 20 = 0$$

$$(x+10)(x+2)$$

$$x+10=0 \quad x+2=0$$

$$\therefore x = -10 \quad \therefore x = -2$$

(4)

$$x^2 - 64 = 0$$

$$(x+8)(x-8)$$

$$\therefore x = -8 \quad \therefore x = +8$$

(5)

$$2x^2 + 9x + 10 = 0$$

$$(2x+4)(x+2.5)$$

$$2x(x+2) + 5(x+2)$$

$$(x+2)(2x+5)$$

$$x = -2$$

$$x = -\frac{5}{2}$$

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Simultaneous equations

①

$$5x + 3y = 39$$

$$8x - 2y = 42$$

$$10x + 6y = 78 \rightarrow$$

$$24x + 6y = 126$$

$$34x = 204$$

$$\therefore x = \frac{204}{34} \quad \therefore x = \underline{6}$$

$$5(6) + 3y = 39$$

$$30 + 3y = 39 \quad \therefore 3y = 39 - 30$$

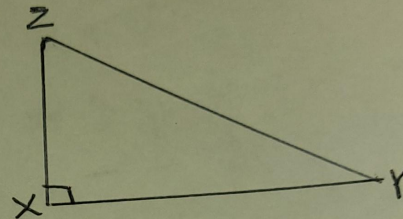
$$\therefore 3y = 9 \quad y = \frac{9}{3}$$

$$y = \underline{3}$$

(i) Angle «Y»

(ii) Angle «Z»

(iii) Angle Length (YZ)



XZ is 4 metres and XY is 7 metres

$$XY = 7$$

$$XZ = 4$$

(2)

$$5(2x^2 - y^2) - x^2(x - y) - x^2y - x^4$$

$$(1) \quad \sqrt[3]{x}$$

$$\therefore x = 0$$

(2) 1

$$\therefore 1 = 0$$