

27th October 2020

1901871

15:30

1. ~~2~~

i. $x^2 + 8x + 15 = 0$

$(x+5)(x+3) = 0$

$x = 5 \quad x = 3$

ii. $x^2 - 225 = 0$

$(x^2 + 15)(x^2 - 15) = 0$

~~$x = \pm 15$~~ $x = \pm 15$

iii. $x^2 + 11x + 30 = 0$

$(x^2 + 6)(x+5) = 0$

$x = 6 \quad x = 5$

iv. $x^2 - 6x + 8 = 0$

$(x-4)(x-2) = 0$

$x = -4 \quad x = -2$

v. $2x^2 + 9x + 7 = 0$

$(2x+7)(x+1) = 0$

$x = -\frac{7}{2} \quad x = -1$

2. $12x^2 + 5x = 7$

$x = -5 + \sqrt{\frac{25+336}{24}}$

$x = -5 - \sqrt{\frac{25+336}{24}}$

$x = -5 - \frac{19}{24}$

$x = -5 + \frac{19}{24}$

$x = -24$

~~$12x^2 + 5x - 7 = 0$~~ $12x^2 + 5x - 7 = 0$

$x = \frac{14}{24}$

$x = -1$

$$\frac{-5 \pm \sqrt{5^2 - [4 \times 12 \times (-7)]}}{2 \times 12}$$

$x = 0.58$

3. $5x + 2y = 22$

$5(4) + 2y = 22$

$x = 4 \quad y = 1$

$4x + 3y = 19$

$20 + 2y = 22$

$15x + 6y = 66$

$2y = 22 - 20$

$8x + 6y = 38$

$2y = 2$

$7x = 28$

$y = \frac{2}{2}$

$x = \frac{28}{7}$

$y = 1$

$x = 4$