

Exam

$$i \quad x^2 + 9x + 14 = 0$$

$$(x+7) \quad (x+2) \quad 7, 2$$

$$x = -7 \quad x = -2$$

$$\text{ii } x^2 - 7x + 10 = 0$$

$$(x-5) \quad (x-2) \quad 5, 2$$

$$(x-5) \quad (x-2) \quad 5, 2$$

$x=5$ $x=2$

$$\text{iii } x^2 + 8x - 20 = 0$$

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

$$(x + \sqrt{10}) \quad (x - \sqrt{10})$$

$$x = -10 \quad x = \cancel{2}$$

$$\text{iv } x^2 - 49 = 0 \quad \sqrt{49} = 7$$

$$(x+7) (x-7)$$

$$(x+7) \quad (x-7)$$

$$x = -1 \quad x = +7$$

$$V \quad 2x^2 - 3x - 20 = 0$$

$$(2x - 20) \quad (x - 1) \quad 20, 1$$

$$(2x-2c) \quad (x-1) \quad 2c, 1$$

$$2x - 20 = 0$$

$$x-1=0$$

$$x + 1 = 0$$

$$\underline{DC = -\frac{1}{2}}$$

①

Exam

1)

i $x^6 \times x^8 \times x^2 \times x$ $6+8+2+1=17$
 $x=17$

ii $(2x^2)^4 \times 3x^3$
 $2x^8 \times 3x^3$
 $6x^{11}$

iii $\frac{x^2 \times x^{10} \times x^1}{x^3}$ $2+10+1=13$
 $= x^{10}$

iv $2\sqrt{x} \times 3\sqrt{x}$ $2 \times 3 = 6$
 $6x$

v $1 = x^1$

(2)

Exam

2)

i $7x - 1 = 5x + 4$

$$7x - 5x = 1 + 4$$

$$2x = 5$$

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

$$x = 2.5$$

ii

~~$$10(3x + 2) = 7(-2x - 1)$$~~

~~$$10 \times 3x = 7 \times -2x$$~~

~~$$30x = -14x$$~~

~~$$x = 29$$~~

~~$$30 + 2 = 32$$~~

~~$$-14 - 1 = -15$$~~

~~$$10(3x + 2) = 7(-2x - 1)$$~~

~~$$30 + 20 = 50 \quad -14 - 7 = -21$$~~

~~$$x = 29$$~~

$$10(3x + 2) = 7(-2x - 1)$$

$$10 \times 3x + 10 \times 2 = 7 \cdot 2x - 7$$

$$30x + 20 = 14x - 7$$

$$50x = 7$$

$$\frac{50}{7} = 7.14$$

iii

(3)

Exam

3.

$$i \quad x^2 + 9x + 14 = 0$$

$$(x+7) \quad (x+2) \quad 7, 2$$

$$x = -7 \quad x = -2$$

$$ii \quad x^2 - 7x + 10 = 0$$

$$(x-5) \quad (x-2) \quad 5, 2$$

$$x = 5 \quad x = 2$$

$$iii \quad x^2 + 8x - 20 = 0$$

$$(x+10) \quad (x-2)$$

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

$$iv \quad x^2 - 49 = 0 \quad \sqrt{49} = 7$$

$$(x+7) \quad (x-7)$$

$$x = -7 \quad x = +7$$

$$v \quad 2x^2 - 3x - 2 = 0$$

$$(2x+1) \quad (x-2) \quad 2, 1$$

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

$$x-1=0$$

$$x+1=0$$

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

(4)

Exam

4) $\underset{a}{17}x^2 = -\underset{b}{5}x + \underset{c}{14} = 0$ QF $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$$x = +5 \pm \frac{\sqrt{-5^2 - 4(17)(14)}}{2(17)^2}$$

$$x = +5 \pm \frac{\sqrt{-25 - 8064}}{578}$$

$$x = 5 \pm \frac{\sqrt{8089}}{578}$$

$$x = 5 \pm \frac{89.66}{578}$$

(5)

Exan

$$51x + 6y = 35 \quad (1)$$

$$x5 | 7x - 4y = 31 \quad (2)$$

$$20x + 20y = 140 \quad (3)$$

$$35x - 20y = 155 \quad (4)$$

$$59x = 295$$

$$\frac{295}{59}$$

$$59$$

$$x = 5$$

$$5x - 4y = 31$$

$$35 - 4y = 31$$

$$35 - 31 = 4$$

$$y = 2$$

$$x = 5$$

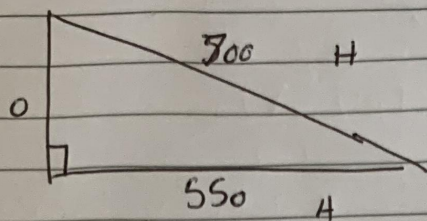
$$y = 2$$

⑥

Exam

6

⑦



SOH CAH TOH

$$\frac{A}{H} \cos \frac{550}{700} = 0.99$$