

P1

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① i) x''

ii) $12x^6$

iii) $x^0 / 1$

iv) $27x^6$

v) $d/dx (\sqrt{x} \sqrt{x}) = 0$

② i) $(15x - 12x) - 2 = (12x - 12x) + 9$

$$3x - 2 = (12x - 12x) + 9$$

$$3x - 2 = 9$$

$$3x = 9 + 2$$

$$3x = 11$$

$$x = \frac{11}{3}$$

ii) $3(2x - 1) = 6(x + 3)$

$$6x - 3 = 6(x + 3)$$

$$6x - 3 = 6(x + 3)$$

$$21x - 3 = 6x + 18$$

$$(21x - 6x) - 3 = (6x - 6x) + 18$$

$$15x - 3 = 18$$

$$15x = 21$$

$$x = 21/15$$

$$x = 7/5$$

iii) $\frac{(5x + 3)}{4} = \frac{2x - 1}{9}$

$$(5x)/4 + 3/4 = (2x - 1)/9$$

$$(5x)/4 + 3/4 = (2x)/9 - 1/9$$

$$((5x)/4 + (2x)/9 + 3/4 = (2x)/9 - (2x)/9 - 1/9$$

$$37x/36 + 3/4 = (2x)/9 - (2x)/9 - 1/9$$

$$37x/36 + 3/4 = ((2x)/9 - (2x)/9) - 1/9$$

$$(37x)/36 + 3/4 = (-1)/9$$

$$37x/36 + (3/4 - 3/4) = -3/4 - 1/9$$

$$37x/36 = -31/36$$

$$x = (-31)/37$$

P2

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③ i) $x^2 + 10x + 21 = 0$
 $(x+3)(x+7) = 0$
 $x+3=0$ or $x+7=0$
 $x = -7$
 $x = -3$

ii) $x^2 - 3x + 2 = 0$
 $(x-2)(x-1) = 0$
 $x-2=0$ or $x-1=0$
 $x = 2$
 $x = 1$

iii) $x^2 + 12x + 20 = 0$
 $(x+2)(x+10) = 0$
 $x+2=0$ or $x+10=0$
 $x = -2$
 $x = -10$

iv) $x^2 - 64 = 0$
 $(x-8)(x+8) = 0$
 $x = -8$
 $x = +8$

v) $2x^2 + 9x + 10 = 0$
 $(x+2)(2x+5) = 0$
 $x+2=0$ or $2x+5=0$
 $x = -2$ or $2x = -5$
 $x = -\frac{5}{2}$

P3

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④
$$\frac{-3 \pm \sqrt{3^2 - 4 \times 14 \times -11}}{2 \times 14}$$

$x = -1$

$x = 0.79$

⑤ Equ ①

$3y + 5x = 39$

$8x - 2y = 42$

$8x - 2y = 42$

$4x - y = 21$

$4x - y = 21$

$4x + 0y = 24$

$0x + 0y = 6$

$x = 6$

Equ ②

$-2y + 8x = 42$

$5x + 3y = 39$

$0x + 17y = 5114$

$0x + 17y = 5114$

$0x + y = 3$

$0x + y = 3$

$0x + y = 3$

$y = 3$

⑥
$$5(2x^2 - y^2) - x^2y - x^2(x^2 - y) - x^4$$

$$5y^2 + 10x^2 - x^2(-y + x^2) - x^2y - x^4$$

$$10x^2 - 5y^2 + x^2y - x^4 - x^2y - x^4$$

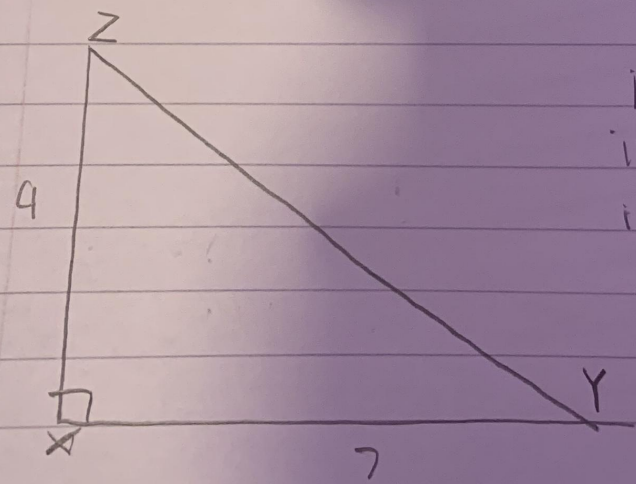
$$-5y^2 + (-x^4 - x^4) + 10x^2 + (x^2y - x^2y)$$

$$-5y^2 + -2x^4 + 10x^2 + (x^2y - x^2y)$$

$$-5y^2 - 2x^4 + 10x^2$$

⑦

Sin CA TA



i) 30°

ii) 60°

iii) 8.06

$a^2 + b^2 = c^2$

$4^2 + 7^2 = 68$

$\sqrt{68} = 8.06$

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④

⑧ i)

in 0