

Solutions Review

PART A

3. a) $5 = |x-7|$

<p style="text-align: center;"><u>Case 1</u></p> $5 = -(x-7)$ $5 = -x + 7$ $x = 2$	<p style="text-align: center;"><u>Case 2</u></p> $5 = (x-7)$ $5 = x-7$ $12 = x$
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b) $(2)^2 = (\sqrt{x+3})^2$

$4 = x + 3$

$1 = x$ ✓

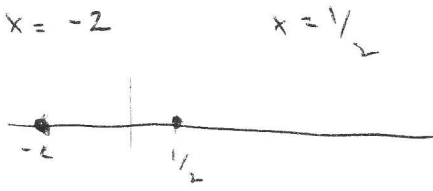
verify $x=1$

$2 - \sqrt{4} = 0$

$2 - 2 = 0$

$0 = 0$

c) $|x+2| = |2x-1|$



d) $(y-3)^2 = (\sqrt{y-1})^2$

$y^2 - 6y + 9 = y - 1$

$y^2 - 7y + 10 = 0$

$(y-5)(y-2) = 0$

$y = 5$ $y = 2$

extraneous

verify $y=5$

$5-2 = \sqrt{5-1} + 1$

$3 = \sqrt{4} + 1$

$3 = 3$ ✓

verify $y=2$

$2-2 = \sqrt{2-1} + 1$

$0 = 1 + 1$

$0 = 2$

X

interval	interval	interval
$(-\infty, -2)$	$(-2, 1/2)$	$(1/2, \infty)$
$(x+2) = -(2x-1)$	$(x+2) = -(2x-1)$	$(x+2) = (2x-1)$
$x-2 = -2x+1$	$x+2 = -2x+1$	$3 = x$
$x = 3$	$3x = -1$	
not int interval	$x = -1/3$	

Soluhun Revisi

PART A

$$3 \text{ e) } (\sqrt{x+6})^2 = (5 - \sqrt{x+1})^2$$

$$x+6 = 25 - 10\sqrt{x+1} + (x+1)$$

$$10\sqrt{x+1} = 20$$

$$\sqrt{x+1} = 2$$

misal $x=3$

$$9 + \sqrt{4} = 5$$

$$3+2 = 5$$

$$5 = 5$$

$$x+1 = 4$$

$$x = 3$$

f) 8

$$5x(3) - 5(x+2)(1) = (x+2)(1)$$

$$15x - 5x - 10 = x+2$$

$$10x - 10 = x+2$$

$$9x = 12$$

$$x = \frac{12}{9}$$

$$x = \frac{4}{3}$$

$$g) (x+1)(x) = 72$$

$$x^2 + x = 72$$

$$x^2 + x - 72 = 0$$

$$(x+9)(x-8) = 0$$

$$x = -9 \quad x = 8$$

Soluhin Revisi

PART A

4 a) $|x+7| \geq 9$

b) $|x-2| \leq 4$

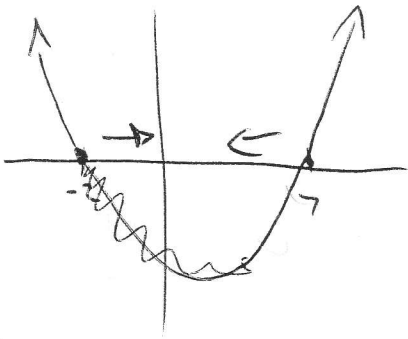
Case 1	Case 2
$x+7 \geq 9$	$-(x+7) \geq 9$
$x \geq 2$	$-x-7 \geq 9$
	$-16 \geq x$

Case 1	Case 2
$x-2 \leq 4$	$-x+2 \leq 4$
$x \leq 6$	$-2 \leq x$

c) $x^2 - 5x \leq 14$

$x^2 - 5x - 14 \leq 0$

$(x-7)(x+2) \leq 0$

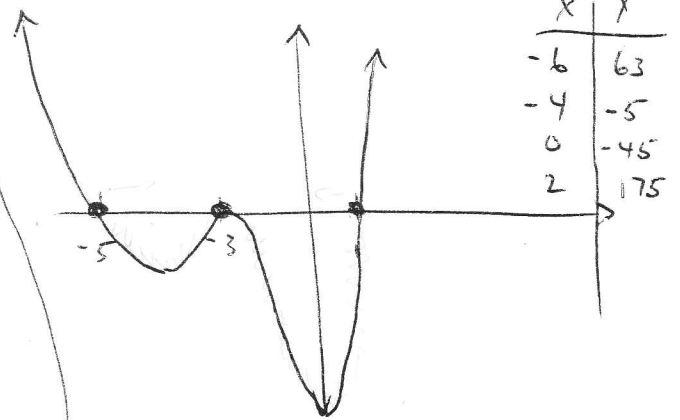


$x \geq -2, x \leq 7$

OR

$-2 \leq x \leq 7$

d) $(x+5)(x+3)^2(x-1) \leq 0$



$-5 \leq x \leq -3, -3 \leq x \leq 1$

OR

$-5 \leq x \leq 1$