LAB ASMT

③ $\frac{(x-4)(x+1)}{x-4} = \frac{(x-1)(x-4)(x+3)}{x+3}$ LCD $= (x-4)(x+3)$

$\frac{(x-4)(x+1)}{x-4} = 1$ $\quad \frac{(x-1)(x-4)(x+3)}{x+3} = (x-1)(x-4)$

$x^2 + 7x + 12 = x^2 - 5x + 4$

$-x^2 \qquad -x^2$

$7x + 12 = -5x + 4$

$+5x \qquad +5x$

$12x + 12 = 4$

$-12 \qquad -12$

$\frac{12x}{12} = \frac{-8}{12}$

$x = -\frac{2}{3}$

Lu WS 6

$$\frac{1}{(x+4)(x+1)}\cdot\frac{x}{x+4} - \frac{1}{x+1} = \frac{1}{(x+4)(x+1)}$$

LCD = $(x+4)(x+1)$

$$x^2 + x - (x+4) = x^2 + 5x + 4$$

$$x^2 + x - x - 4 = x^2 + 5x + 4$$

$$x^2 - 4 = x^2 + 5x + 4$$

$$-x^2 \qquad -x^2$$

$$-4 = 5x + 4$$

$$-4 \qquad -4$$

$$\frac{-8}{5} = \frac{5x}{5}$$

$$\frac{-8}{5} = x$$

8 $x^2 = 10x$

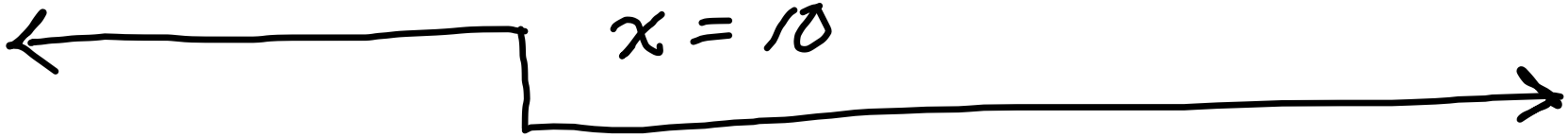
$-10x \quad -10x$

$x^2 - 10x = 0$

$x(x-10) = 0$

$x = 0$ or $x - 10 = 0$

$x = 10$



$2x^2 - 9x - 10$

↓ change

$2x^2 - 9x + 10$

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③ WS. $2x^2 - 5x - 25$

prod -50
sum -5
$-10(5)$

$2x^2 - 10x + 5x - 25$

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

$(x-5)(2x+5)$ done.

$6x^2 + 11x - 10$

$6x^2 + 15x - 4x - 10$

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

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

prod -60

sum 11

$-4(15)$

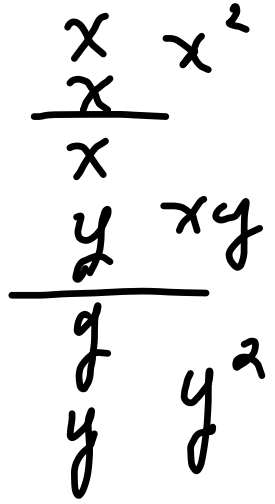
$6x^2 - 4x + 15x - 10$

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

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

$x^3 - y^3$

$(x-y)(x^2+xy+y^2)$



$2x^2 - 9x + 10$

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

$2x(x-2) - 5(x-2)$

$(x-2)(2x-5)$

prod 20
sum -9
$(-4)(-5)$

$m^3n^3 + 1$

$(mn+1)(m^2n^2 - mn + 1)$

The sum of two cubes

$(mn)^3$

$x^2 - 3x - 10$

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

prod -10 $(-5)(2)$

sum -3

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

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

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

$27x^3 + 64z^3$

$(3x)^3 + (4z)^3$

$(3x + 4z)(9x^2 - 12xz + 16z^2)$

$3x^2 - x - 10$

prod -30 $(5)(-6)$
sum -1

$3x^2 - 6x + 5x - 10$

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

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

7.3 39 $\dfrac{4x+1}{x^2+5x+4} - \dfrac{x+3}{x^2+4x+3}$ LCD $= (x+4)(x+1)(x+3)$

$$\left(\frac{x+3}{x+3}\right)\frac{4x+1}{(x+4)(x+1)} - \frac{(x+3)}{(x+3)(x+1)}\left(\frac{x+4}{x+4}\right)$$

$$\frac{4x^2+x+12x+3-(x^2+7x+12)}{(x+3)(x+4)(x+1)}$$

$$\frac{4x^2+13x+3-x^2-7x-12}{(x+3)(x+4)(x+1)}$$

$$\frac{3x^2+6x-9}{(x+3)(x+4)(x+1)}$$

$$\frac{3(x^2+2x-3)}{(x+3)(x+4)(x+1)}$$

$$\frac{3(x+3)(x-1)}{(x+3)(x+4)(x+1)}$$

$$\frac{3(x-1)}{(x+4)(x+1)}$$

8.6 (33d) $(\sqrt{y-4})^2 = (y-6)^2$

$y - 4 = y^2 - 12y + 36$

$-y + 4 \qquad -y + 4$

$0 = y^2 - 13y + 40$

prod 40
sum -13
(-5)(-8)

$0 = (y-5)(y-8)$

$y - 5 = 0$ or $y - 8 = 0$

$+5 \quad +5 \qquad +8 \quad +8$

$y = 5$ $\qquad y = 8$

Check $\sqrt{y-4} = y-6$

$y = 5$ $\qquad \sqrt{5-4} = 5-6$

$\sqrt{1} = -1$

$1 = -1$ oops

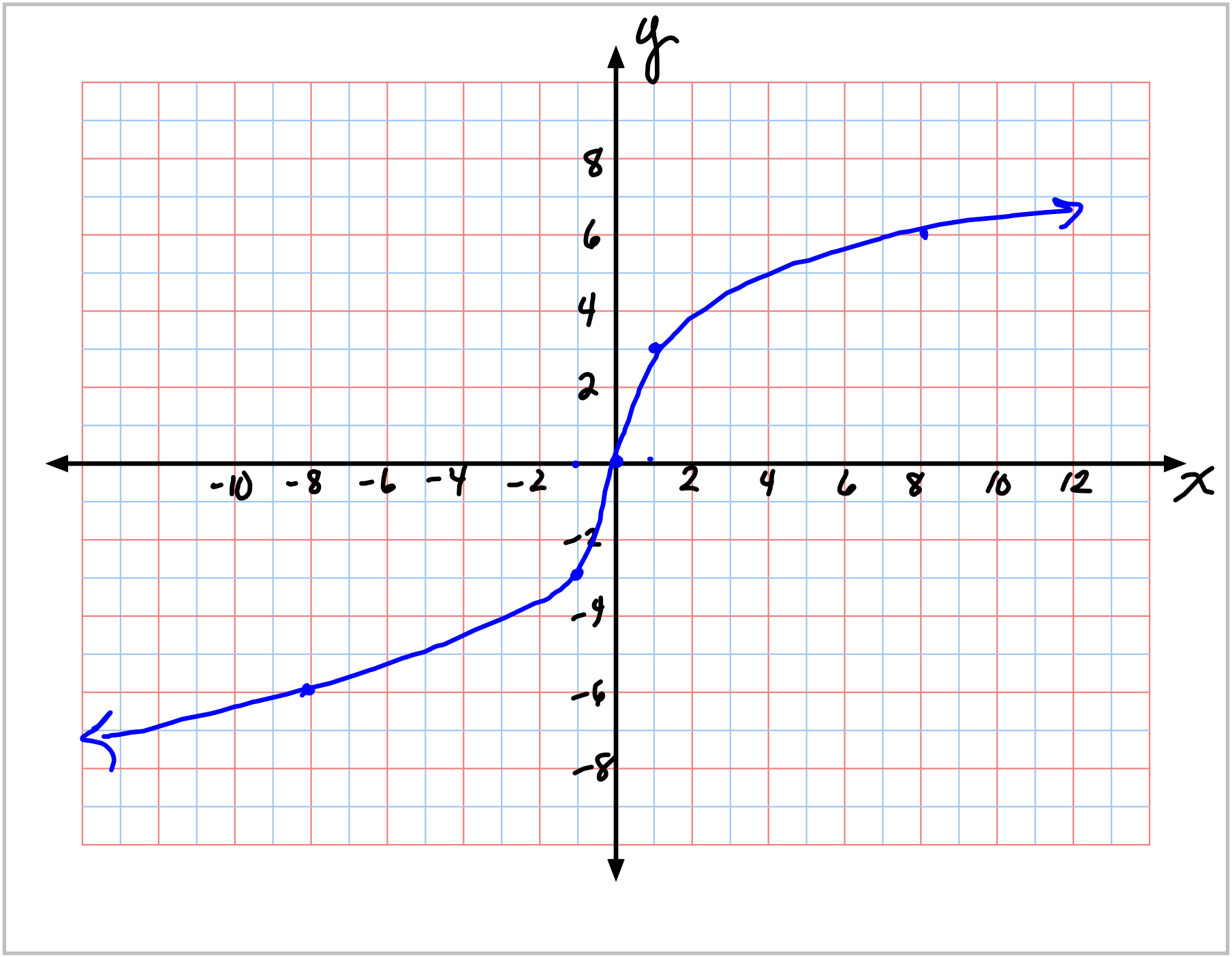
$\sqrt{8-4} = 8-6$

$\sqrt{4} = 2$

$2 = 2$

(42) $y = 3\sqrt[3]{x}$

x	y
-8	$3(-2) = -6$
-1	$3(-1) = -3$
0	$3(0) = 0$
1	$3(1) = 3$
8	$3(2) = 6$


y
x
8
6
4
2
-2
-4
-6
-8
-10
-8
-6
-4
-2
2
4
6
8
10
12

① $\sqrt{25-9}$

$\sqrt{16}$

4

⑧ $\sqrt[4]{4+12}$

$\sqrt[4]{16}$

2

$\sqrt{25 \cdot 9} = \sqrt{225}$

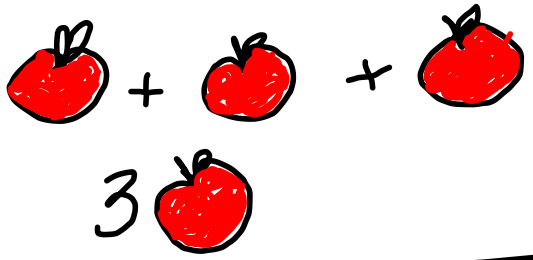
$\sqrt{25} \cdot \sqrt{9}$

$5 \cdot 3$

15

(12) $\sqrt[3]{3} + \sqrt[3]{3} + \sqrt[3]{3}$

$3\sqrt[3]{3}$



$\sqrt[3]{3} =$ 

(15) $\sqrt[3]{\frac{8-7}{8}}$

$\sqrt[3]{\frac{1}{8}}$

$\frac{\sqrt[3]{1}}{\sqrt[3]{8}}$

$\frac{1}{2}$

(14) $\frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{2}$

$\frac{3}{4}$

(2) $7\sqrt{3} - \sqrt{3}$

$6\sqrt{3}$

(13) $\frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2}$

$\frac{\sqrt{3}+\sqrt{3}}{2}$

$\frac{2\sqrt{3}}{2}$

$\sqrt{3}$

$\sqrt{x} + \sqrt{x}$

$2\sqrt{x}$

(7) $\sqrt[3]{9}$