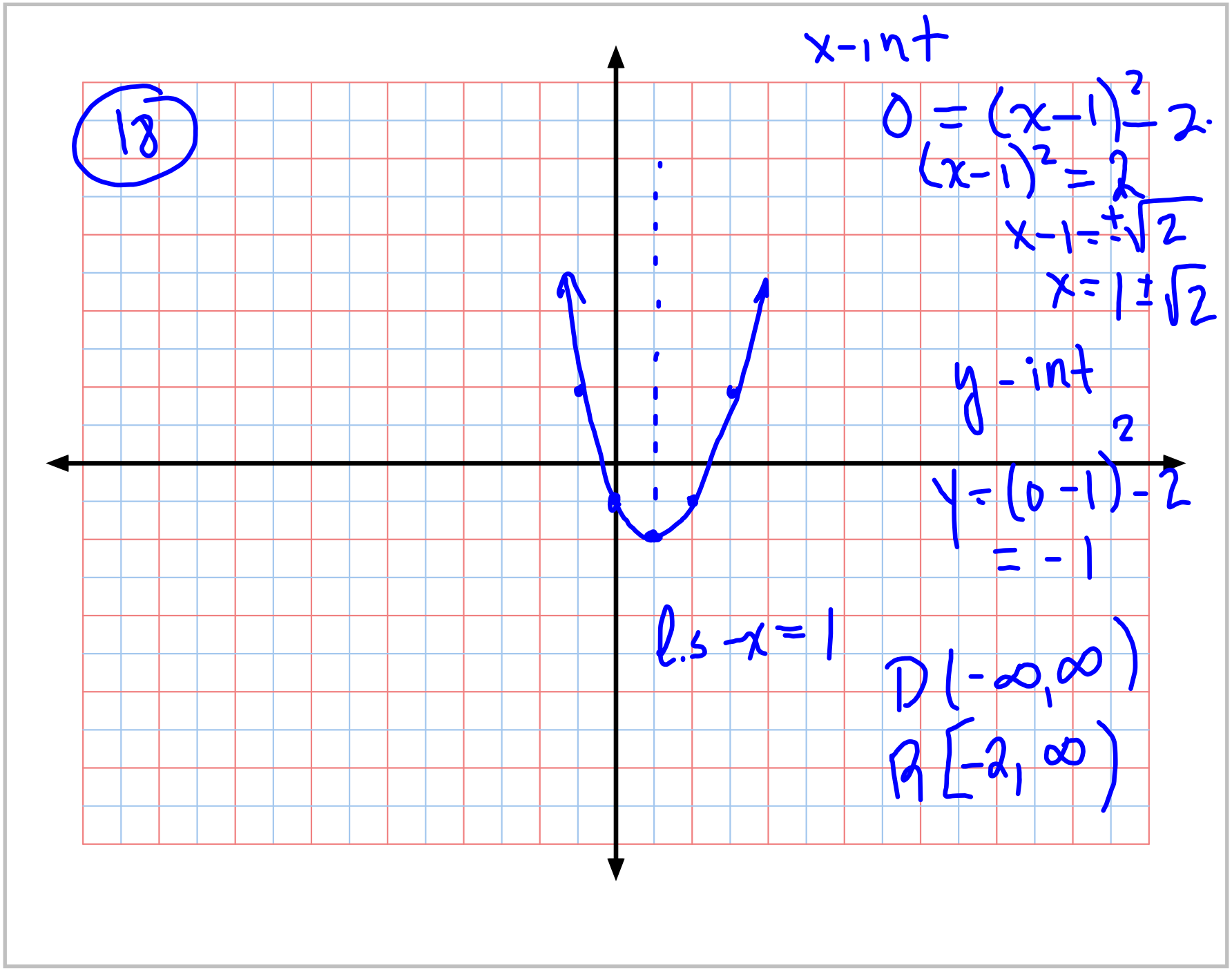
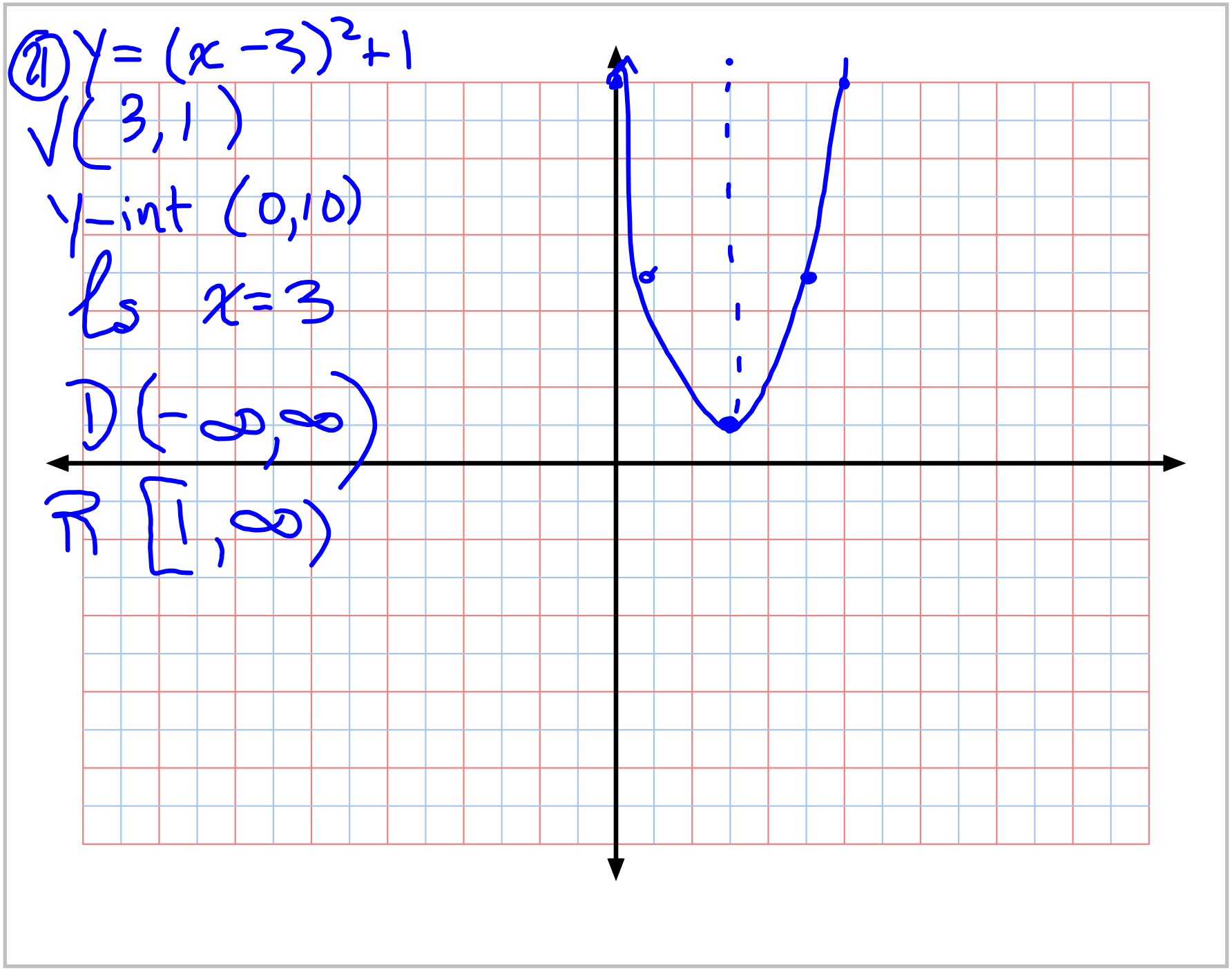
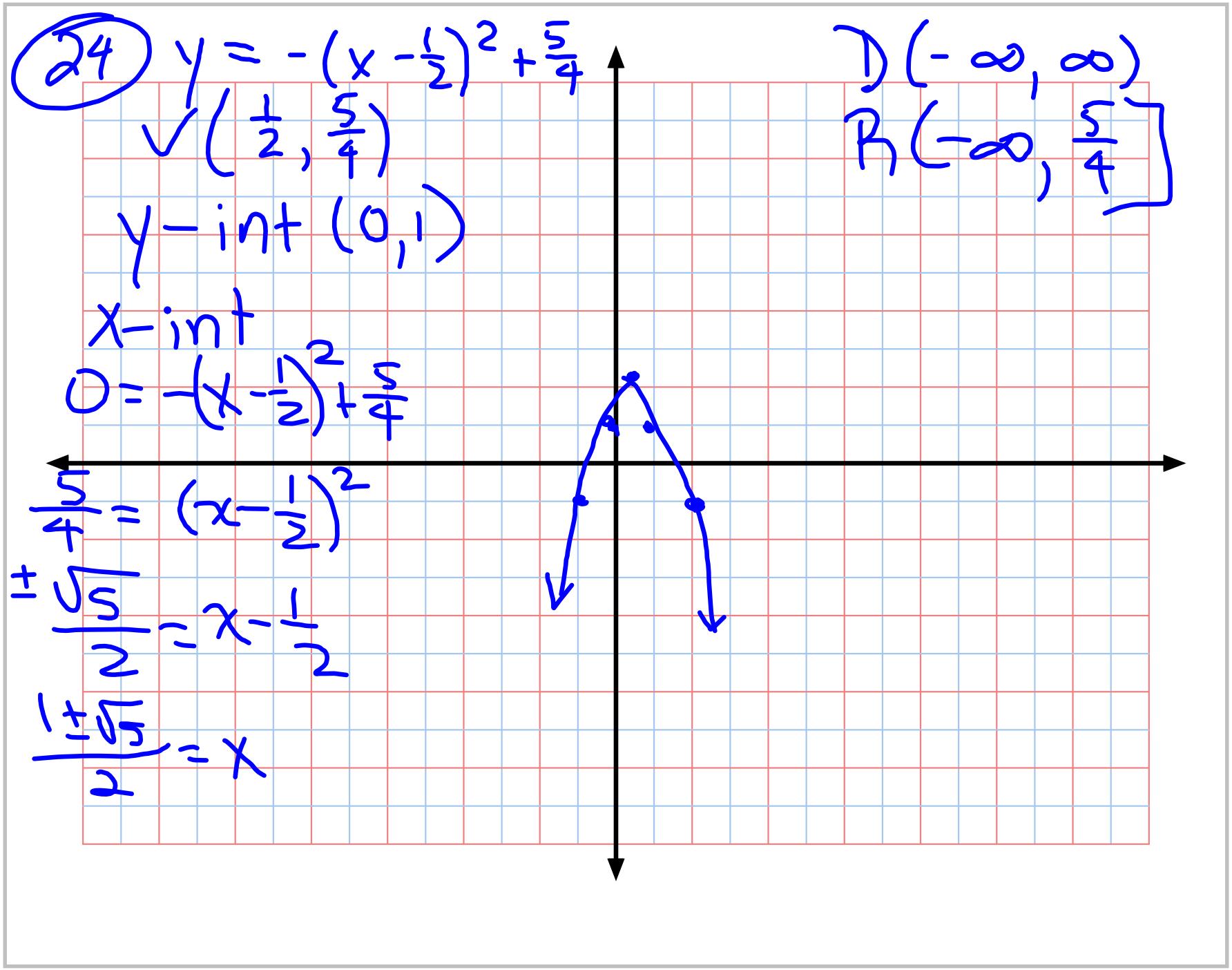
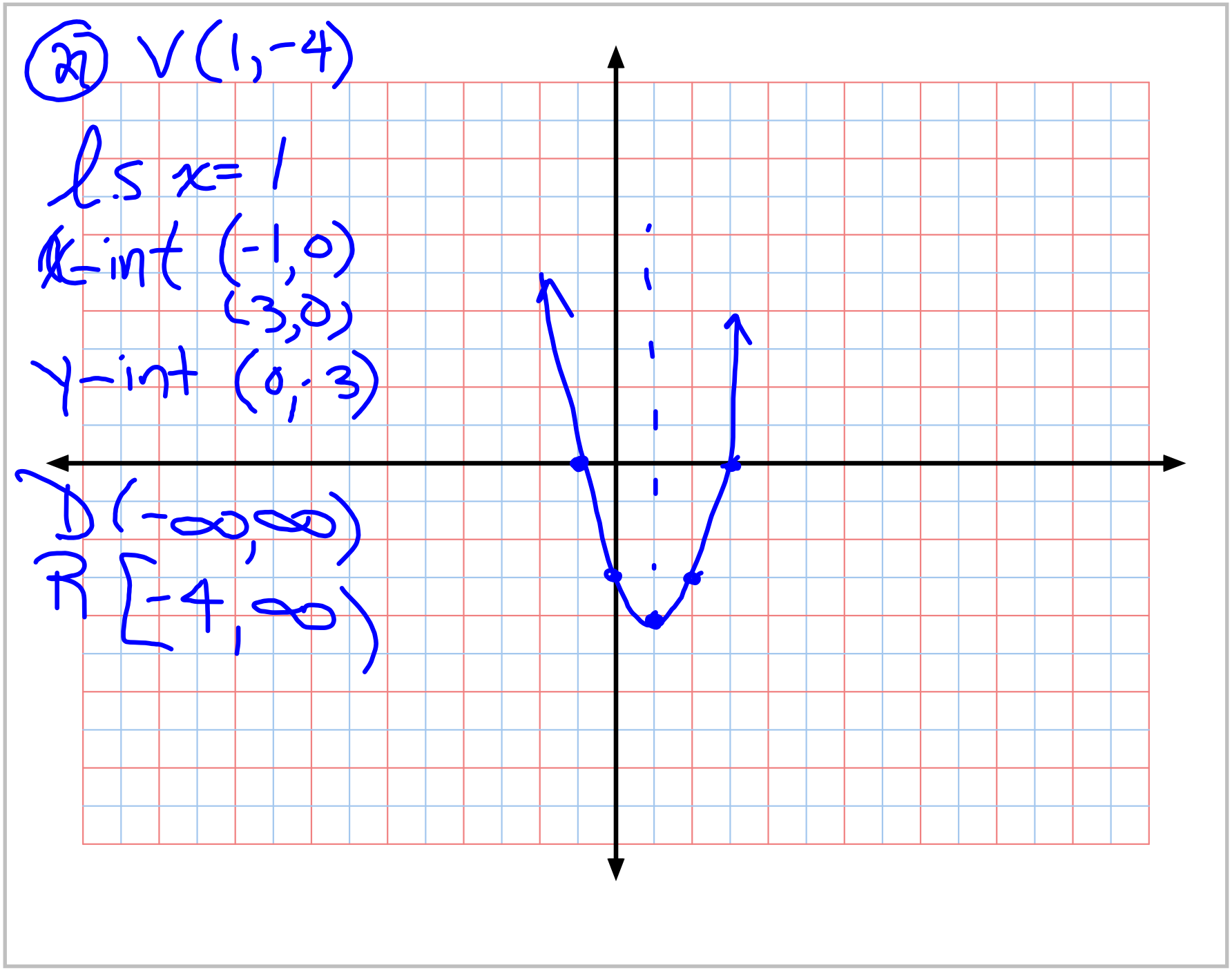

18
x-int
$0 = (x-1)^2 - 2$
$(x-1)^2 = 2$
$x-1 = \pm\sqrt{2}$
$x = 1 \pm \sqrt{2}$
y-int
$y = (0-1)^2 - 2$
$= -1$
l.s $x = 1$
$D(-\infty, \infty)$
$R[-2, \infty)$


① $y=(x-3)^2+1$
V (3, 1)
y-int (0, 10)
ls $x=3$
D $(-\infty, \infty)$
R $[1, \infty)$


24
$y = -(x-\frac{1}{2})^2 + \frac{5}{4}$
$\checkmark\left(\frac{1}{2}, \frac{5}{4}\right)$
y-int (0,1)
x-int
$0 = -(x-\frac{1}{2})^2 + \frac{5}{4}$
$\frac{5}{4} = (x-\frac{1}{2})^2$
$\pm\frac{\sqrt{5}}{2} = x - \frac{1}{2}$
$\frac{1\pm\sqrt{5}}{2} = x$
D $(-\infty, \infty)$
R $(-\infty, \frac{5}{4}]$


(2) V(1,-4)
l.s x=1
x-int (-1,0)
(3,0)
y-int (0,3)
D (-∞,∞)
R [-4,∞)

30 $y = 2x^2 - 7x - 4$

$V\left(\frac{-(-7)}{2(2)}, \right.$

$\left.\left(\frac{7}{4}, -\frac{81}{8}\right)\right.$

(30) $V\left(\frac{7}{4}, -\frac{81}{8}\right)$

I.S $x = \frac{7}{4}$

x-int

$0 = 2x^2 - 7x - 4$

$(2x + 1)(x - 4)$

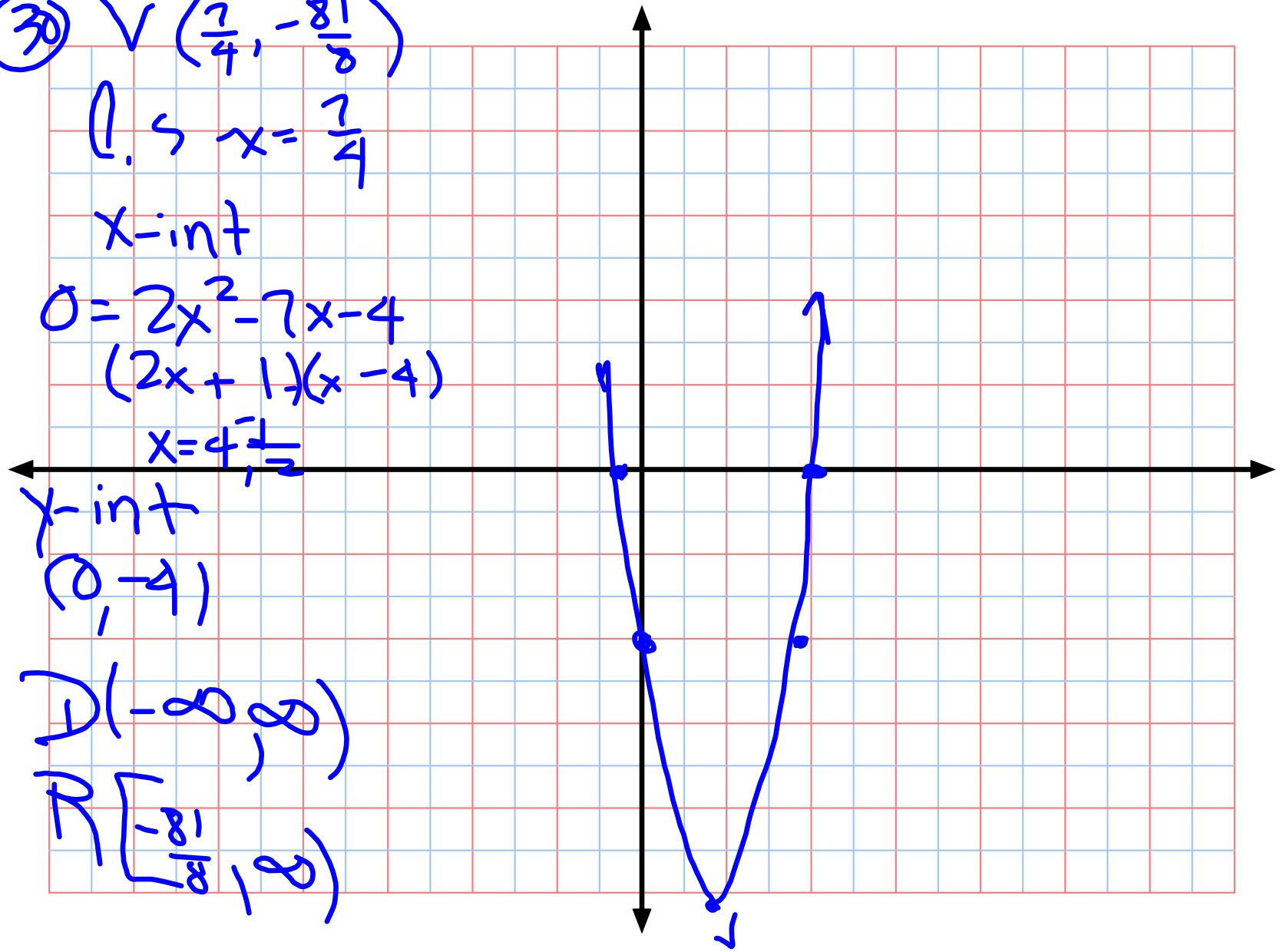
$x = 4, -\frac{1}{2}$

y-int

$(0, -4)$

D $(-\infty, \infty)$

R $\left[-\frac{81}{8}, \infty\right)$



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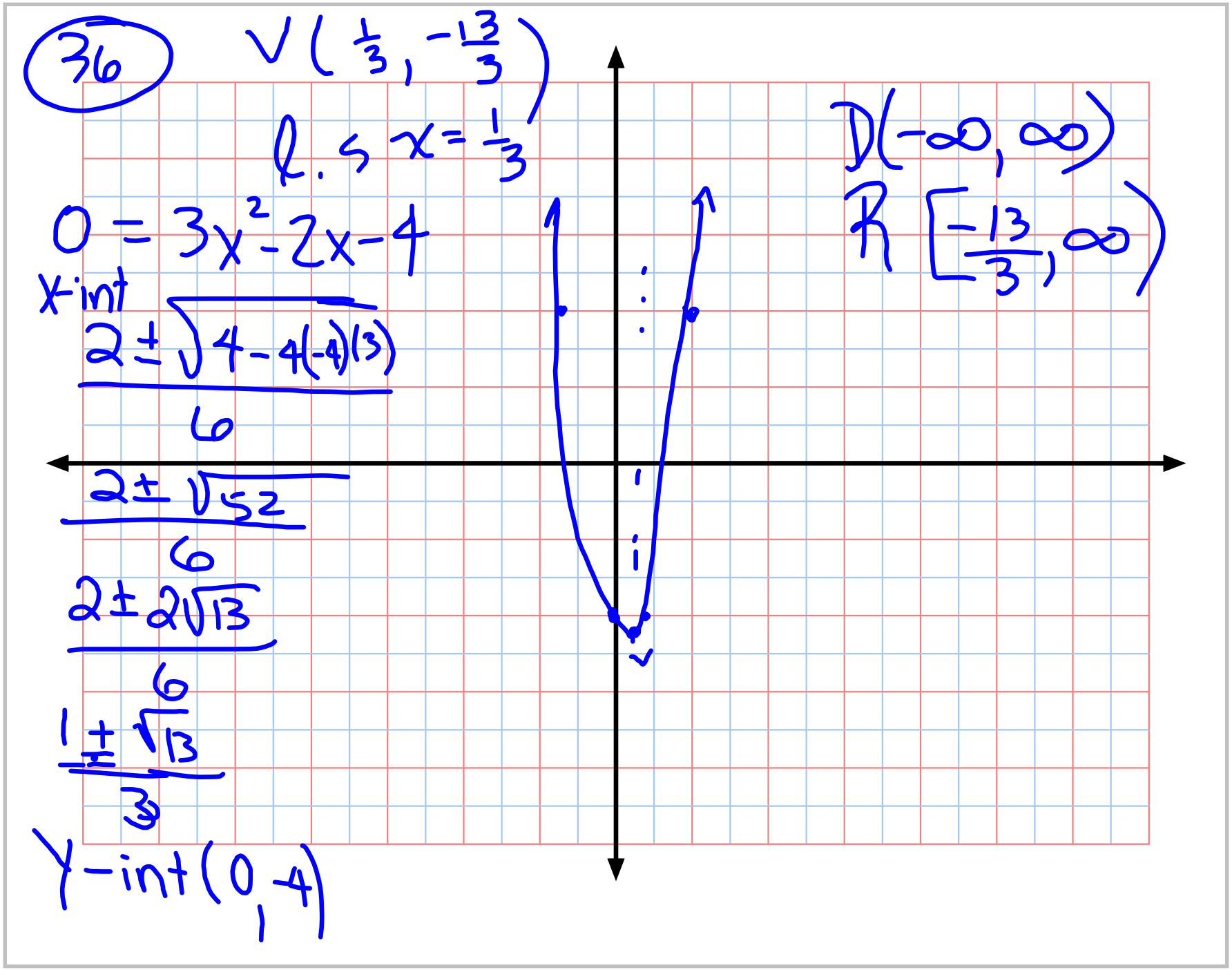
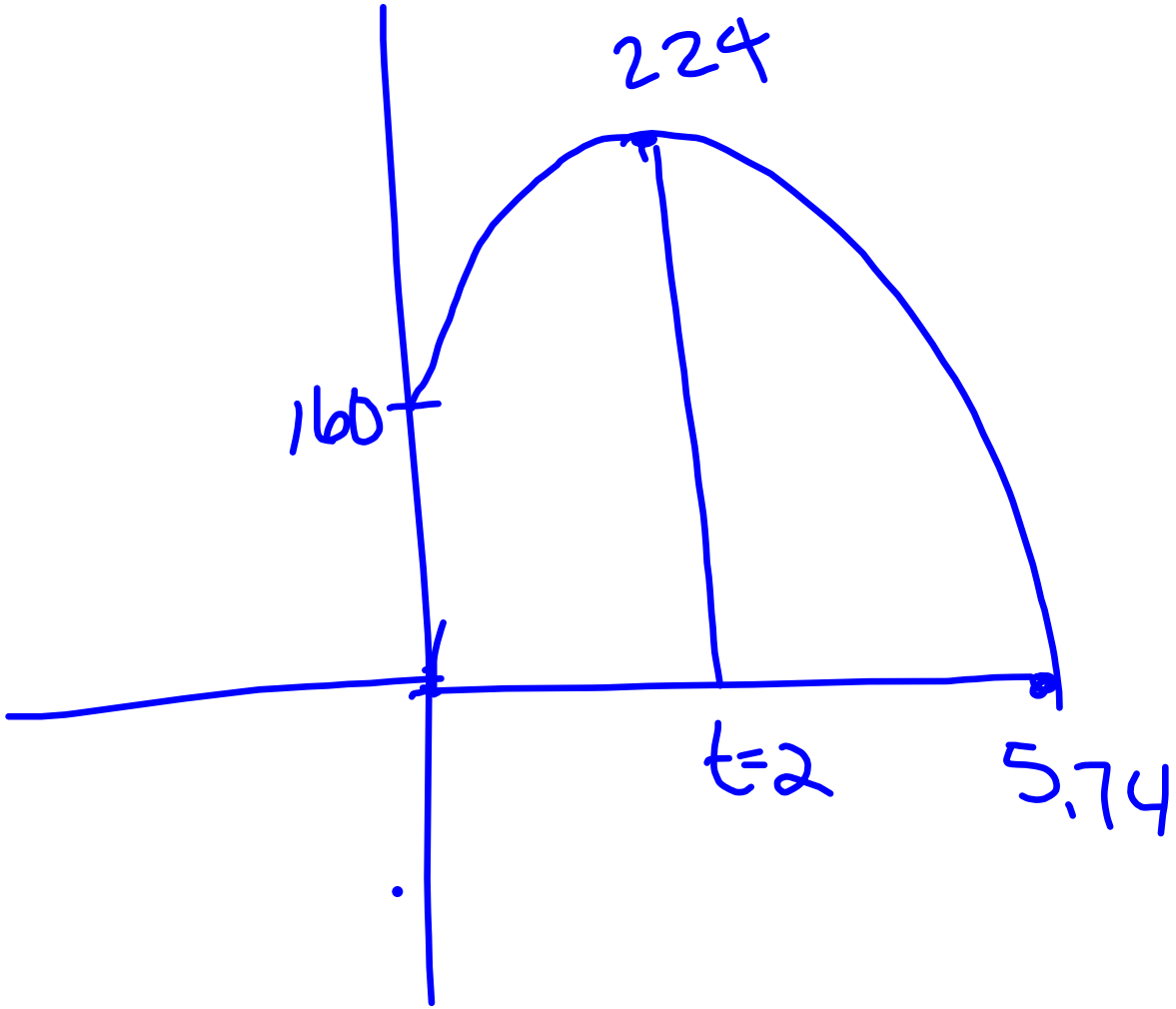
(36) $3x^2 - 2x - 4 = F(x)$

$\left(\frac{-(-2)}{2(3)}\right)$

$\left(\frac{1}{3}, -\frac{13}{3}\right)$


36
V $(\frac{1}{3}, -\frac{13}{3})$
l.s $x = \frac{1}{3}$
$0 = 3x^2 - 2x - 4$
x-int
$\frac{2 \pm \sqrt{4 - 4(-4)(3)}}{6}$
$\frac{2 \pm \sqrt{52}}{6}$
$\frac{2 \pm 2\sqrt{13}}{6}$
$\frac{1 \pm \sqrt{13}}{3}$
Y-int $(0, -4)$
D $(-\infty, \infty)$
R $[\frac{-13}{3}, \infty)$

(60)



62

$x = 1st\ \#$

$(20 - x) = 2nd\ \#$

$x(20 - x) = y$

$-x^2 + 20x = f(x)$

$V\left(\frac{-20}{-2}\right.$

$(10, 10)$

$\max\ (0 \cdot 10 = 100$

(64) x = 1st # (larger) 12

$x - 24$ = 2nd # −12

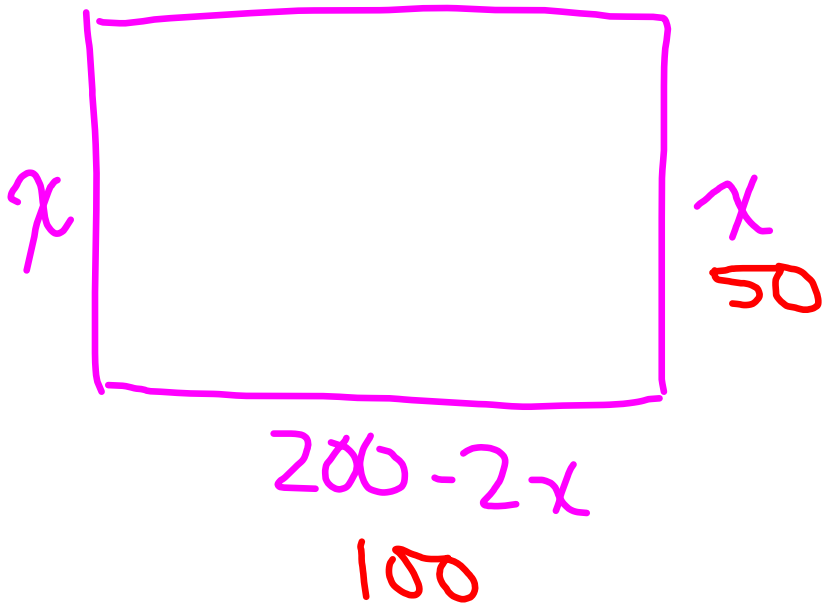
$x(x-24) = f(x)$

$x^2 - 24x$

$V\left(\frac{24}{2}\right.$

$V(12, -144)$

(e6)



$V\left(\frac{-200}{-4}\right)$

$V(50, 5000)$

$x(200-2x)=f(x)$

$200x-2x^2$

$-2x^2+200x=f(x)$

(68)

$x(80-2x) = f(x)$

$80x - 2x^2 = f(x)$

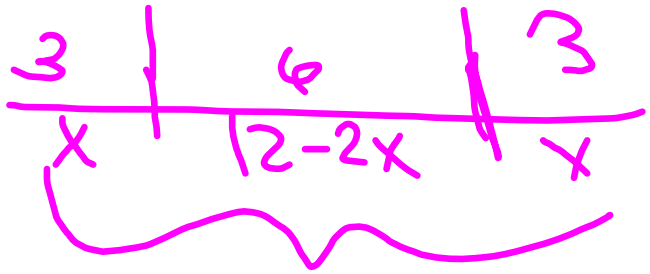
$-2x^2 + 80x = f(x)$

$V\left(\frac{-80}{-4}\right)$

$V(20, 800)$

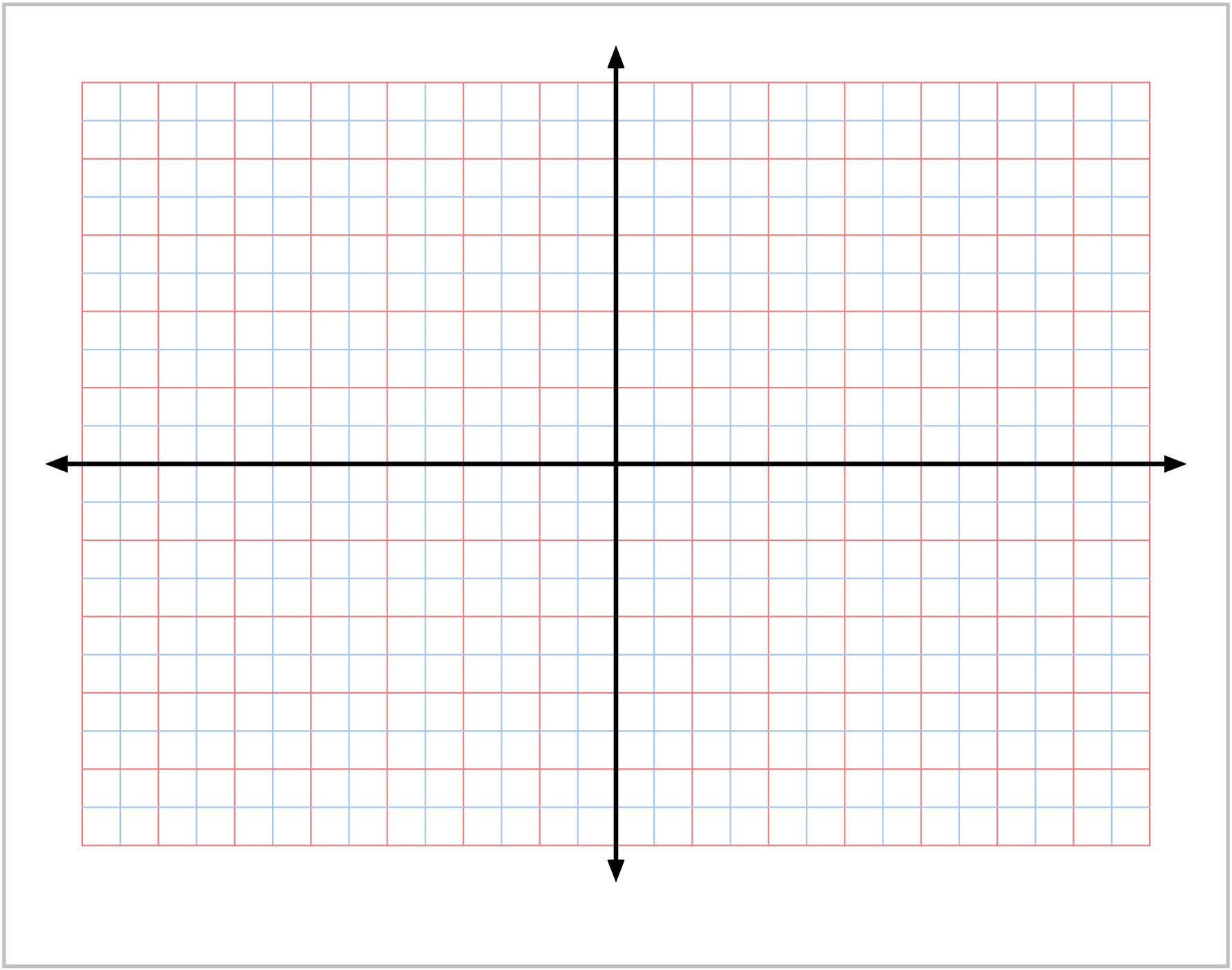
$V = \left(\frac{-12}{-4}\right)$

$(3, 18)$



$x(12-2x) = f(x)$

$-2x^2 + 12x = f(x)$



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