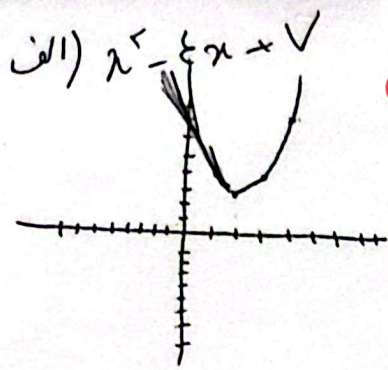
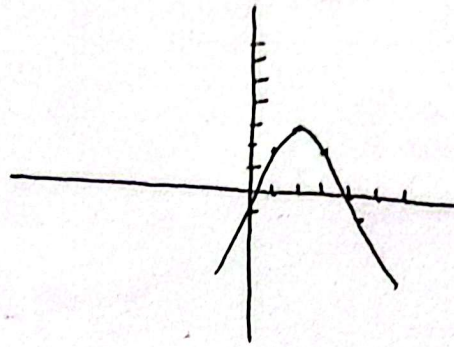




19, 15

ب) $-x^2 + 4x - 1$



1

5

الف) $\Delta > 0 \Rightarrow (m+1)^2 - 4(1)(\frac{1}{2}m+2)$

$\Rightarrow m^2 + 1 + 2m - 4m - 16 > 0 \rightarrow m^2 - 2m - 15 > 0 \rightarrow (m-5)(m+3)$

ب) $\Delta = 0 \Rightarrow (m+1)^2 - 4(1)(\frac{1}{2}m+2)$

$\Rightarrow m^2 - 2m - 15 = 0 \quad m = 5 \quad m = -3$

$\frac{-2}{m=5} \quad \frac{5}{m=-3}$
 $\Rightarrow (-\infty, -3) \cup (\frac{1}{5}, +\infty)$

5

ج) $\Delta < 0 \rightarrow m^2 - 2m - 15 < 0$

$\frac{-2}{+} \quad \frac{5}{-} \quad + \Rightarrow (-3, 5)$

$\Rightarrow \Delta \geq 0 \rightarrow (-\infty, -3] \cup [5, +\infty)$

الف) $\Delta > 0 \rightarrow (m+1)^2 - 4(1)(\frac{1}{2}m+2) > 0 \rightarrow m^2 - 2m - 15 > 0 \rightarrow m < -3 \text{ or } m > 5$

$S < 0 \rightarrow \frac{2(m+1)}{2} = m+1 < 0 \quad m < -1$ (1)

$P > 0 \rightarrow \frac{10}{m-2} > 0 \Rightarrow m < 2$

$\frac{2}{-} \quad \frac{1}{+} \Rightarrow m > 2$ (2)

$1 \cap 2 = \emptyset$

5

ب) $S < 0 \rightarrow \frac{2(m+1)}{(m-2)} < 0 \rightarrow \frac{-1}{+} \quad \frac{2}{-} \Rightarrow [-1, 2)$ (1)

$P < 0 \rightarrow \frac{10}{m-2} < 0 \rightarrow \frac{2}{-} \quad \frac{1}{+} \Rightarrow m < 2 \rightarrow (-\infty, 2)$ (2)

$(1) \cap (2) \rightarrow [-1, 2)$

$$\text{الف) } a \times c < 0 \rightarrow (m-2) \times 10 < 0 \rightarrow 10m - 20 < 0 \rightarrow 10m < 20 \rightarrow \underline{m < 2}$$

$$\text{ب) } \frac{-b}{2a} = -2 \rightarrow \frac{x(m+1)}{x(m-1)} = -2 \Rightarrow -2m + 2 = m + 1$$

$$\underline{m = \frac{1}{3}} \quad m = 1$$

1, 1, 0

$$\Delta \geq 0 \rightarrow \epsilon \sin^2 \alpha - \epsilon \left(\frac{r}{\epsilon} \right) \left(\frac{x}{r} \right) = \epsilon \sin^2 \alpha - f \geq 0 \quad \sin^2 \geq 1$$

$$\Rightarrow \underline{\sin \geq 1} \quad \underline{\sin \leq -1} \quad \text{X}$$

$$(2x-1)^r = 0 \rightarrow 2x = \frac{r}{r}$$

$$\frac{(2x-1)(2x+1)(2x-1)}{(1-2x)(1+2x)} = -(2x-1)(2x+1) \rightarrow -2x^2 + 12x + 10 = 0$$

$$\max x = \frac{-12}{-2} = \frac{12}{2} \Rightarrow -2 \left(\frac{149}{144} \right) + \frac{149}{12} + \frac{10}{2} = 0$$

$$\frac{-1012 + 14928 + 1440}{144} = \frac{14928}{144} = \frac{149}{12} = \frac{149}{12}$$

$$v(\alpha + \beta) = \omega \alpha \beta + v$$

$$v \left(\frac{m+r}{m} \right) = \omega \left(\frac{-r}{m} \right) + v$$

$$\frac{vm+r}{m} = \frac{-10+vm}{m}$$

$$\Rightarrow vm+r = vm-10$$

$$10 = \epsilon m \rightarrow \underline{m = 10}$$

$$y = \epsilon x^2 - 4x - 2$$

$$\Rightarrow \alpha^r + \beta^r = \delta^r - 2p = \left(\frac{9}{2} \right)^r - 2 \left(\frac{-r}{\epsilon} \right) = \frac{29}{14} - \frac{-r}{\epsilon}$$

$$\Rightarrow \frac{9}{2} + \frac{\epsilon}{\epsilon} = \boxed{\frac{13}{2}}$$

$\alpha + \beta = \omega$
 $\alpha = \omega - \beta \Rightarrow \frac{\xi \alpha + \beta \omega}{\gamma \omega \beta^r} = \frac{\gamma_0 - \xi \beta + \beta \omega}{\omega \beta^r} = \frac{\gamma_0 - \xi \beta + \beta \omega}{\gamma \omega \beta - \gamma_0}$

$\beta^r = \omega \beta - r$
 $\beta \omega = \omega \beta^r - r \beta^r$
 $\rightarrow \beta^r (\omega \beta^r - r \beta) \rightarrow (\omega \beta - r) (\gamma \omega \beta - \gamma_0) \rightarrow$

$\frac{\alpha^r + \beta^r}{\omega} = \frac{S^r - r_s p}{\omega} = 19$

$\frac{\xi(\omega - \beta) + (\omega \beta - r)(\gamma \omega \beta - \gamma_0)}{\gamma \omega \beta - \gamma_0}$

(1)

$y_i = ax^r + bx + c$
 $y_r = rx + \gamma_0$
 $x = r \rightarrow r(r) + \gamma_0 = 1\xi$
 $x = -r = r(-r) + \gamma_0 = \xi$

$ra + rb + f = 1\xi$
 $ra - rb + f = f$
 $\xi a + rb = 10$
 $ra - rb = 0 \Rightarrow$

$12a + 9b = 10$
 $11a - 9b = 0$
 $\hline$
 $23a = 10$
 $\Rightarrow a = \frac{10}{23}$
 $b = \frac{10}{23}$
 $\Rightarrow y_i = \frac{10}{23}x^r + \frac{10}{23}x + f$

$\text{Slope} = \frac{-b}{ra} = \frac{-r}{r} = \boxed{-\frac{r}{r}}$

(9)

$y = rx^r + (m+1)x + m + \xi$
 $y = x$

$rx^r + (m+1)x + m + \xi = x$
 $rx^r + (m)\cancel{x} + m + \xi = 0$
 $\Delta = 0 \rightarrow m^r - \xi(r)(m + \xi) = 0$
 $m^r - 11m - \xi A = 0$
 $(m - 1\xi)(m + \xi)$
 $m = 1\xi$
 $m = -\xi$

(10)