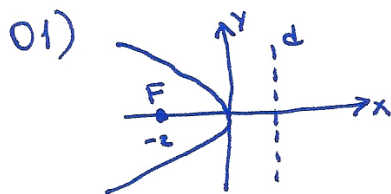


PARÁBOLA



$$y^2 = -4Px$$

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

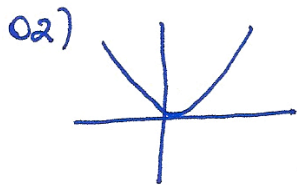
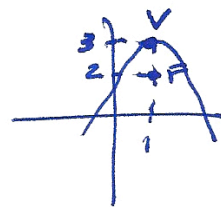
$$y^2 = -8x$$

PARTE 2 Q2)

$$x^2 = -4Py$$

$$(x-1)^2 = -4 \cdot 1 \cdot (y-3)$$

$$(x-1)^2 = -4(y-3)$$



$$x^2 = 4Py$$

$$1^2 = 4P \cdot 2$$

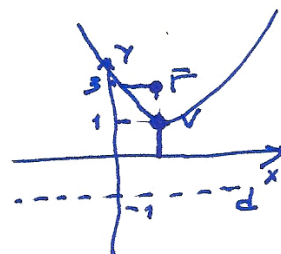
$$1 = 8P$$

$$P = \frac{1}{8}$$

$$03) x^2 = 4Py$$

$$(x-1)^2 = 4 \cdot 2 \cdot (y-1)$$

$$(x-1)^2 = 8(y-1)$$



$$x^2 = 4 \cdot \frac{1}{8} \cdot y$$

$$x^2 = \frac{1}{2} y$$

$$2x^2 = y$$

$$2x^2 - y = 0$$

$$03) y^2 = -4Px$$

$$-4P = \frac{-3}{7}$$

$$7y^2 = -3x$$

$$y^2 = \frac{-3x}{7}$$

$$P = \frac{3}{28}$$

$$F\left(-\frac{3}{28}, 0\right)$$

$$06) V(1,1)$$

$$y^2 = 4Px$$

$$P = 1$$

$$y^2 = 4 \cdot 1 \cdot x$$

$$y^2 = 4x$$

$$(y-1)^2 = 4(x-1)$$

$$04) y^2 = \frac{x}{k}$$

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

$$y^2 = 4Px$$

$$\frac{1}{k} = 12$$

$$y^2 = 4 \cdot 3 \cdot x$$

$$k = \frac{1}{12}$$

$$y^2 = 12x$$

$$07) V(1,3)$$

$$x^2 = 4Py$$

$$x^2 - 2x + 1 = y - 3$$

$$(x-1)^2 = 4P(y-3)$$

$$x^2 - 2x + 1 - y + 3 = 0$$

$$(2-1)^2 = 4P(4-3)$$

$$x^2 - 2x - y + 4 = 0$$

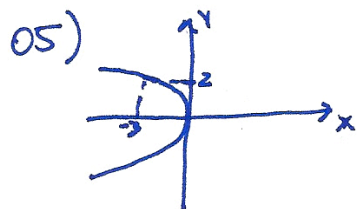
$$1 = 4P$$

$$P = \frac{1}{4}$$

$$x^2 = 4 \cdot \frac{1}{4} \cdot y$$

$$x^2 = y$$

$$(x-1)^2 = (y-3)$$



$$y^2 = -4Px$$

$$y^2 = -4 \cdot \frac{1}{3} \cdot x$$

$$2^2 = -4P(-3)$$

$$y^2 = \frac{-4x}{3}$$

$$4 = +12P$$

$$3y^2 = -4x$$

$$P = \frac{1}{3}$$

$$3y^2 + 4x = 0$$

01) a) EIXO MAIOR EM Y ENTÃO

$$\frac{y^2}{a^2} + \frac{x^2}{b^2} = 1$$

$$a = 5$$

$$b = 4$$

ENTÃO

EIXO MAIOR = a
EIXO MENOR = b

$$\frac{y^2}{5^2} + \frac{x^2}{4^2} = 1$$

$$\frac{y^2}{25} + \frac{x^2}{16} = 1$$

2) EIXO MAIOR X

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

$$b = \sqrt{5}$$

$$c = 3$$

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

$$a^2 = (\sqrt{5})^2 + 3^2$$

$$a^2 = 5 + 9$$

$$a^2 = 14$$

$$a = \sqrt{14}$$

$$\frac{x^2}{(\sqrt{14})^2} + \frac{y^2}{(\sqrt{5})^2} = 1$$

$$\frac{x^2}{14} + \frac{y^2}{5} = 1$$

12) EIXO MAIOR

$$2a = 10$$

$$a = 5$$

EIXO MENOR

$$2b = 8$$

$$b = 4$$

DISTÂNCIA FOCAL = 2c

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

$$5^2 = 4^2 + c^2$$

$$25 - 16 = c^2$$

$$c = 3$$

$$2c = 6$$

13) EIXO FOCAL EM Y

$$\frac{y^2}{a^2} + \frac{x^2}{b^2} = 1$$

$$\frac{y^2}{5^2} + \frac{x^2}{2^2} = 1$$

$$\frac{y^2}{25} + \frac{x^2}{4} = 1$$

$$04) 25x^2 + 16y^2 = 400$$

$$\frac{25x^2}{400} + \frac{16y^2}{400} = 1$$

$$\frac{x^2}{16} + \frac{y^2}{25} = 1$$

$$\frac{x^2}{4^2} + \frac{y^2}{5^2} = 1$$

$$e = \frac{c}{a} \rightarrow e = \frac{3}{5}$$

$$17) 5^2 = 3^2 + c^2$$

$$25 - 9 = c^2$$

$$c = 4$$

$$F = (0, 4) \text{ e } (0, -4)$$

SUBSTITUIR O PONTO COM Y=4

$$\frac{x^2}{3^2} + \frac{y^2}{5^2} = 1$$

$$\frac{x^2}{9} + \frac{y^2}{25} = 1$$

$$\frac{x^2}{9} + \frac{16}{25} = 1$$

$$\frac{x^2}{9} = 1 - \frac{16}{25}$$

$$\frac{x^2}{9} = \frac{25-16}{25}$$

$$\frac{x^2}{9} = \frac{9}{25}$$

$$x^2 = \frac{81}{25}$$

$$x = \sqrt{\frac{81}{25}}$$

$$x = \frac{9}{5}$$

HIPERBOLE

$$01) 9x^2 - 16y^2 = 144$$

$$\frac{9x^2}{144} - \frac{16y^2}{144} = 1$$

$$\frac{x^2}{16} - \frac{y^2}{9} = 1$$

$$\frac{x^2}{4^2} - \frac{y^2}{3^2} = 1$$

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

$$c^2 = 4^2 + 3^2$$

$$c^2 = 16 + 9$$

$$c^2 = 25$$

$$c = 5$$

$$2c = 10$$

$$02) B = 3 \quad c = 4$$

$$4^2 = a^2 + 3^2$$

$$16 - 9 = a^2$$

$$7 = a^2$$

$$a = \sqrt{7}$$

$$\frac{x^2}{(\sqrt{7})^2} - \frac{y^2}{3^2} = 1$$

$$\frac{x^2}{7} - \frac{y^2}{9} = 1$$

$$03) c^2 = a^2 + b^2$$

$$8^2 = 6^2 + b^2$$

$$64 - 36 = b^2$$

$$b^2 = 28$$

$$b = \sqrt{28}$$

$$\frac{y^2}{a^2} - \frac{x^2}{b^2} = 1$$

$$\frac{y^2}{6^2} - \frac{x^2}{(\sqrt{28})^2} = 1$$

$$\frac{y^2}{36} - \frac{x^2}{28} = 1$$

$$01) \frac{(x-1)^2}{7} - \frac{(y-2)^2}{2} = 1$$

$$a = \sqrt{7}$$

$$b = \sqrt{2}$$

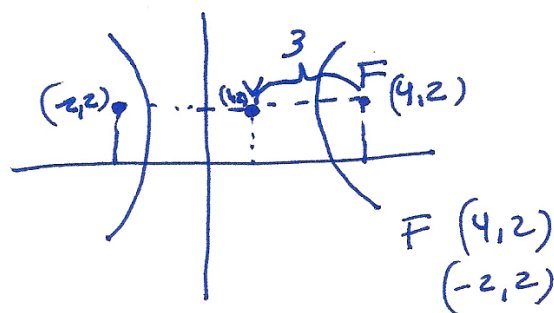
$$c^2 = a^2 + b^2$$

$$c^2 = (\sqrt{7})^2 + (\sqrt{2})^2$$

$$c^2 = 7 + 2$$

$$c^2 = 9$$

$$c = 3$$



$$02) v(4, 3) \quad a = 1 \quad c = 2$$

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

$$2^2 = 1^2 + b^2$$

$$4 - 1 = b^2$$

$$b = \sqrt{3}$$

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

$$\frac{(x-4)^2}{1^2} - \frac{(y-3)^2}{(\sqrt{3})^2} = 1$$

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