

$$\frac{-\Delta}{f_a} = 7 \rightarrow \frac{-(b^2 - 12)}{-4} = 7 \rightarrow b^2 + 12 = 28 \rightarrow b = \boxed{\pm 4}$$

۱

$$f(x) = x^4 + 2x^2 + 3 = t^2 + 2t + 3 \rightarrow \Delta < 0 \rightarrow \boxed{\text{ریشه ندارد}}$$

۲

$$f(x) = (x^2 - 4)^2 - 2(x^2 - 4) - 15 \rightarrow t^2 - 2t - 15 = (t - 5)(t + 3)$$

$$t = 5 \rightarrow x^2 = -1 \text{ غلط}$$

$$t = -3 \rightarrow x^2 = 7 \rightarrow x = \boxed{\pm \sqrt{7}}$$

$$f(x^2 - 14x + m) = 0 \rightarrow p: f = x + (x + 2) \rightarrow x = \boxed{1} \text{ و } x + 2 = \boxed{3}$$

اگر یکی از ریشه ها ۱ باشد، جمع ضرایب صفر شود $\rightarrow$

$$f - 14 + m = 0 \rightarrow \boxed{m = 14}$$

۳

$$3x^2 - 4x + m - 1 = 0 \text{ و } 2a_2 - B = f \rightarrow 2a = B + f \rightarrow a = \frac{B + f}{2}$$

$$p: 2 = B + \frac{B + f}{2} = \frac{3B + f}{2} = 2 \rightarrow B = 0, a = 2$$

$$S: 0 \times 2 = 0 \rightarrow \frac{m - 1}{2} = 0 \rightarrow \boxed{m = 1}$$

۴

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

۵

$$x^r - mx + r = 0$$

$$\left. \begin{array}{l} aB = r \\ aB^r = f \end{array} \right\} B = \frac{f}{r} \rightarrow a = \frac{q}{f}$$

$$S = \frac{m}{1} = \frac{q}{f} + \frac{f}{r} = \frac{rV + 1r}{1r} = \boxed{\frac{fV}{1r}}$$

6

$$x^r - f n + m = 0 \rightarrow p = x + r n = f \rightarrow x = 1 \text{ و } r n = r$$

$$S = x, x_r = 1 \times r = r \rightarrow \boxed{m = r}$$

7

$$a^r + \frac{1}{a^r}$$

$$(a)^r + \left(\frac{r}{a}\right)^r \rightarrow \left(a + \frac{r}{a}\right) \left(a^r + \frac{f}{a^r} - r\right) \rightarrow a + \frac{r}{a} = \frac{a^r + r}{a} = \frac{Va}{a} = v$$

$$a^r + \frac{f}{a^r} \rightarrow \frac{a^r + f}{a^r} = \frac{(a^r + r)^r}{a^r} - f = f - f = f$$

$$(a)^r + \left(\frac{r}{a}\right)^r = V_x (f - r) = \boxed{r}$$

8

$$h(t) = -10t^r + 50t = -10t(t - 5) = 0 \rightarrow t = 0 \rightarrow \text{في } t=0 \text{ شروع}$$

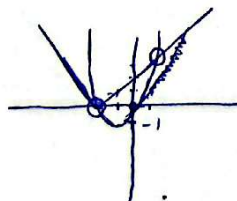
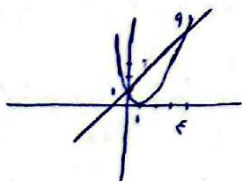
$$\rightarrow \boxed{t = 5} \rightarrow \text{في } t=5 \text{ توقف}$$

$$-\frac{b}{r} = \frac{50}{r} \rightarrow f\left(\frac{50}{r}\right) = -\frac{10 \times 50}{r} + 10 \times 50 = \frac{10 \times 50}{r} = \boxed{40, 50}$$

9

$$(n-1)^r = r n, 1 \rightarrow \boxed{0, 9}$$

$$x, x^r + r n = |x + r| \rightarrow \boxed{-r, 9}$$



10