

پاساگامی

دسته

1.  $n \geq a$  ;  $x^2 + 2n$  ;  $f(n)$  تابع است مقدار  $a$  را  
 برای  $n$  و  $a$  قرین و تقسیم و چون تابع  
 و برابری را

$$x^2 + 2a = x^2 - 2$$

$$a = -2$$

2. مقدار  $f(n) = \frac{x^2 + a}{2n - b}$  ،  $g(n) = 2n + b$  در  $(2, 2)$  تقاطع

تقاطع کنند  $f(1)$   $a = 11$

$$f(2) = 2 \quad \frac{f+a}{2n-b} = 2 \quad \frac{f+a}{2} = 2$$

$$g(2) = 2 \quad f+b = 2 \quad b = -1 \quad f(1) = \frac{1+11}{2+1} = 4$$

3.  $f(n) = \frac{fn+1}{2n^2+an+b}$  در  $R - \{1, 2\}$  باشد  $f(1)$   $f(2)$   $f(3)$   $f(4)$   $f(5)$   $f(6)$   $f(7)$   $f(8)$   $f(9)$   $f(10)$   $f(11)$   $f(12)$   $f(13)$   $f(14)$   $f(15)$   $f(16)$   $f(17)$   $f(18)$   $f(19)$   $f(20)$   $f(21)$   $f(22)$   $f(23)$   $f(24)$   $f(25)$   $f(26)$   $f(27)$   $f(28)$   $f(29)$   $f(30)$   $f(31)$   $f(32)$   $f(33)$   $f(34)$   $f(35)$   $f(36)$   $f(37)$   $f(38)$   $f(39)$   $f(40)$   $f(41)$   $f(42)$   $f(43)$   $f(44)$   $f(45)$   $f(46)$   $f(47)$   $f(48)$   $f(49)$   $f(50)$   $f(51)$   $f(52)$   $f(53)$   $f(54)$   $f(55)$   $f(56)$   $f(57)$   $f(58)$   $f(59)$   $f(60)$   $f(61)$   $f(62)$   $f(63)$   $f(64)$   $f(65)$   $f(66)$   $f(67)$   $f(68)$   $f(69)$   $f(70)$   $f(71)$   $f(72)$   $f(73)$   $f(74)$   $f(75)$   $f(76)$   $f(77)$   $f(78)$   $f(79)$   $f(80)$   $f(81)$   $f(82)$   $f(83)$   $f(84)$   $f(85)$   $f(86)$   $f(87)$   $f(88)$   $f(89)$   $f(90)$   $f(91)$   $f(92)$   $f(93)$   $f(94)$   $f(95)$   $f(96)$   $f(97)$   $f(98)$   $f(99)$   $f(100)$

$$f(1) = \frac{f+1}{2+2f+b} = 1 \quad f(2) = \frac{2f+1}{8+4f+b} = 2 \quad f(3) = \frac{3f+1}{18+9f+b} = 3 \quad f(4) = \frac{4f+1}{32+16f+b} = 4$$

$$f(5) = \frac{5f+1}{50+25f+b} = 5 \quad f(6) = \frac{6f+1}{72+36f+b} = 6 \quad f(7) = \frac{7f+1}{98+49f+b} = 7 \quad f(8) = \frac{8f+1}{128+64f+b} = 8$$

$$f(9) = \frac{9f+1}{162+81f+b} = 9 \quad f(10) = \frac{10f+1}{200+100f+b} = 10$$

$$f(11) = \frac{11f+1}{242+121f+b} = 11 \quad f(12) = \frac{12f+1}{288+144f+b} = 12$$

$$f(13) = \frac{13f+1}{338+169f+b} = 13 \quad f(14) = \frac{14f+1}{392+196f+b} = 14$$

$$f(15) = \frac{15f+1}{450+225f+b} = 15 \quad f(16) = \frac{16f+1}{512+256f+b} = 16$$

$$f(17) = \frac{17f+1}{578+289f+b} = 17 \quad f(18) = \frac{18f+1}{648+324f+b} = 18$$

$$f(19) = \frac{19f+1}{722+361f+b} = 19 \quad f(20) = \frac{20f+1}{800+400f+b} = 20$$

$$f(21) = \frac{21f+1}{882+441f+b} = 21 \quad f(22) = \frac{22f+1}{968+484f+b} = 22$$

$$f(23) = \frac{23f+1}{1062+529f+b} = 23 \quad f(24) = \frac{24f+1}{1164+576f+b} = 24$$

$$f(25) = \frac{25f+1}{1274+625f+b} = 25 \quad f(26) = \frac{26f+1}{1392+676f+b} = 26$$

$$f(27) = \frac{27f+1}{1518+729f+b} = 27 \quad f(28) = \frac{28f+1}{1652+784f+b} = 28$$

$$f(29) = \frac{29f+1}{1794+841f+b} = 29 \quad f(30) = \frac{30f+1}{1944+900f+b} = 30$$

$$f(31) = \frac{31f+1}{2102+961f+b} = 31 \quad f(32) = \frac{32f+1}{2268+1024f+b} = 32$$

$$f(33) = \frac{33f+1}{2442+1089f+b} = 33 \quad f(34) = \frac{34f+1}{2624+1160f+b} = 34$$

$$f(35) = \frac{35f+1}{2814+1240f+b} = 35 \quad f(36) = \frac{36f+1}{3012+1320f+b} = 36$$

$$f(37) = \frac{37f+1}{3228+1409f+b} = 37 \quad f(38) = \frac{38f+1}{3452+1500f+b} = 38$$

$$f(39) = \frac{39f+1}{3694+1600f+b} = 39 \quad f(40) = \frac{40f+1}{3944+1700f+b} = 40$$

$$f(41) = \frac{41f+1}{4202+1809f+b} = 41 \quad f(42) = \frac{42f+1}{4478+1920f+b} = 42$$

$$f(43) = \frac{43f+1}{4772+2040f+b} = 43 \quad f(44) = \frac{44f+1}{5084+2160f+b} = 44$$

$$f(45) = \frac{45f+1}{5404+2290f+b} = 45 \quad f(46) = \frac{46f+1}{5742+2420f+b} = 46$$

$$f(47) = \frac{47f+1}{6108+2560f+b} = 47 \quad f(48) = \frac{48f+1}{6492+2700f+b} = 48$$

$$f(49) = \frac{49f+1}{6904+2850f+b} = 49 \quad f(50) = \frac{50f+1}{7334+3000f+b} = 50$$

$$f(51) = \frac{51f+1}{7792+3160f+b} = 51 \quad f(52) = \frac{52f+1}{8278+3320f+b} = 52$$

$$f(53) = \frac{53f+1}{8792+3490f+b} = 53 \quad f(54) = \frac{54f+1}{9334+3660f+b} = 54$$

$$f(55) = \frac{55f+1}{9904+3840f+b} = 55 \quad f(56) = \frac{56f+1}{10492+4020f+b} = 56$$

$$f(57) = \frac{57f+1}{11178+4210f+b} = 57 \quad f(58) = \frac{58f+1}{11892+4400f+b} = 58$$

$$f(59) = \frac{59f+1}{12634+4600f+b} = 59 \quad f(60) = \frac{60f+1}{13424+4800f+b} = 60$$

$$f(61) = \frac{61f+1}{14252+5000f+b} = 61 \quad f(62) = \frac{62f+1}{15118+5200f+b} = 62$$

$$f(63) = \frac{63f+1}{16022+5410f+b} = 63 \quad f(64) = \frac{64f+1}{16974+5620f+b} = 64$$

$$f(65) = \frac{65f+1}{17964+5840f+b} = 65 \quad f(66) = \frac{66f+1}{18992+6060f+b} = 66$$

$$f(67) = \frac{67f+1}{19958+6290f+b} = 67 \quad f(68) = \frac{68f+1}{21054+6520f+b} = 68$$

$$f(69) = \frac{69f+1}{22192+6760f+b} = 69 \quad f(70) = \frac{70f+1}{23372+7000f+b} = 70$$

$$f(71) = \frac{71f+1}{24594+7250f+b} = 71 \quad f(72) = \frac{72f+1}{25838+7500f+b} = 72$$

$$f(73) = \frac{73f+1}{27114+7760f+b} = 73 \quad f(74) = \frac{74f+1}{28422+8020f+b} = 74$$

$$f(75) = \frac{75f+1}{29714+8290f+b} = 75 \quad f(76) = \frac{76f+1}{31092+8560f+b} = 76$$

$$f(77) = \frac{77f+1}{32546+8840f+b} = 77 \quad f(78) = \frac{78f+1}{34078+9120f+b} = 78$$

$$f(79) = \frac{79f+1}{35698+9410f+b} = 79 \quad f(80) = \frac{80f+1}{37396+9700f+b} = 80$$

$$f(81) = \frac{81f+1}{39182+10000f+b} = 81 \quad f(82) = \frac{82f+1}{40958+10300f+b} = 82$$

$$f(83) = \frac{83f+1}{42814+10610f+b} = 83 \quad f(84) = \frac{84f+1}{44682+10920f+b} = 84$$

$$f(85) = \frac{85f+1}{46602+11240f+b} = 85 \quad f(86) = \frac{86f+1}{48514+11560f+b} = 86$$

$$f(87) = \frac{87f+1}{50548+11890f+b} = 87 \quad f(88) = \frac{88f+1}{52596+12220f+b} = 88$$

$$f(89) = \frac{89f+1}{54768+12560f+b} = 89 \quad f(90) = \frac{90f+1}{56964+12900f+b} = 90$$

$$f(91) = \frac{91f+1}{59286+13250f+b} = 91 \quad f(92) = \frac{92f+1}{61524+13600f+b} = 92$$

$$f(93) = \frac{93f+1}{63898+13960f+b} = 93 \quad f(94) = \frac{94f+1}{66306+14320f+b} = 94$$

$$f(95) = \frac{95f+1}{68850+14690f+b} = 95 \quad f(96) = \frac{96f+1}{71438+15060f+b} = 96$$

$$f(97) = \frac{97f+1}{74062+15440f+b} = 97 \quad f(98) = \frac{98f+1}{76782+15820f+b} = 98$$

$$f(99) = \frac{99f+1}{79588+16210f+b} = 99 \quad f(100) = \frac{100f+1}{82490+16600f+b} = 100$$

4.  $f(n) = \frac{x^2 - \sqrt{x}}{-fn^2 + an + b}$  است  $R - \{-1\}$   $a, b$   $f(1) = 1$   $f(2) = 2$   $f(3) = 3$   $f(4) = 4$   $f(5) = 5$   $f(6) = 6$   $f(7) = 7$   $f(8) = 8$   $f(9) = 9$   $f(10) = 10$   $f(11) = 11$   $f(12) = 12$   $f(13) = 13$   $f(14) = 14$   $f(15) = 15$   $f(16) = 16$   $f(17) = 17$   $f(18) = 18$   $f(19) = 19$   $f(20) = 20$   $f(21) = 21$   $f(22) = 22$   $f(23) = 23$   $f(24) = 24$   $f(25) = 25$   $f(26) = 26$   $f(27) = 27$   $f(28) = 28$   $f(29) = 29$   $f(30) = 30$   $f(31) = 31$   $f(32) = 32$   $f(33) = 33$   $f(34) = 34$   $f(35) = 35$   $f(36) = 36$   $f(37) = 37$   $f(38) = 38$   $f(39) = 39$   $f(40) = 40$   $f(41) = 41$   $f(42) = 42$   $f(43) = 43$   $f(44) = 44$   $f(45) = 45$   $f(46) = 46$   $f(47) = 47$   $f(48) = 48$   $f(49) = 49$   $f(50) = 50$   $f(51) = 51$   $f(52) = 52$   $f(53) = 53$   $f(54) = 54$   $f(55) = 55$   $f(56) = 56$   $f(57) = 57$   $f(58) = 58$   $f(59) = 59$   $f(60) = 60$   $f(61) = 61$   $f(62) = 62$   $f(63) = 63$   $f(64) = 64$   $f(65) = 65$   $f(66) = 66$   $f(67) = 67$   $f(68) = 68$   $f(69) = 69$   $f(70) = 70$   $f(71) = 71$   $f(72) = 72$   $f(73) = 73$   $f(74) = 74$   $f(75) = 75$   $f(76) = 76$   $f(77) = 77$   $f(78) = 78$   $f(79) = 79$   $f(80) = 80$   $f(81) = 81$   $f(82) = 82$   $f(83) = 83$   $f(84) = 84$   $f(85) = 85$   $f(86) = 86$   $f(87) = 87$   $f(88) = 88$   $f(89) = 89$   $f(90) = 90$   $f(91) = 91$   $f(92) = 92$   $f(93) = 93$   $f(94) = 94$   $f(95) = 95$   $f(96) = 96$   $f(97) = 97$   $f(98) = 98$   $f(99) = 99$   $f(100) = 100$

$$\frac{-b}{-a} = -2 \quad a = -1 \quad \frac{c-b}{a-2} = 1 \quad b = -2$$

$$-2 \quad -1-2 = -3$$

5.  $f(n) = \frac{2n}{(n-1)(n^2+m^2+1)}$   $R - \{1\}$   $m$   $f(1) = 1$   $f(2) = 2$   $f(3) = 3$   $f(4) = 4$   $f(5) = 5$   $f(6) = 6$   $f(7) = 7$   $f(8) = 8$   $f(9) = 9$   $f(10) = 10$   $f(11) = 11$   $f(12) = 12$   $f(13) = 13$   $f(14) = 14$   $f(15) = 15$   $f(16) = 16$   $f(17) = 17$   $f(18) = 18$   $f(19) = 19$   $f(20) = 20$   $f(21) = 21$   $f(22) = 22$   $f(23) = 23$   $f(24) = 24$   $f(25) = 25$   $f(26) = 26$   $f(27) = 27$   $f(28) = 28$   $f(29) = 29$   $f(30) = 30$   $f(31) = 31$   $f(32) = 32$   $f(33) = 33$   $f(34) = 34$   $f(35) = 35$   $f(36) = 36$   $f(37) = 37$   $f(38) = 38$   $f(39) = 39$   $f(40) = 40$   $f(41) = 41$   $f(42) = 42$   $f(43) = 43$   $f(44) = 44$   $f(45) = 45$   $f(46) = 46$   $f(47) = 47$   $f(48) = 48$   $f(49) = 49$   $f(50) = 50$   $f(51) = 51$   $f(52) = 52$   $f(53) = 53$   $f(54) = 54$   $f(55) = 55$   $f(56) = 56$   $f(57) = 57$   $f(58) = 58$   $f(59) = 59$   $f(60) = 60$   $f(61) = 61$   $f(62) = 62$   $f(63) = 63$   $f(64) = 64$   $f(65) = 65$   $f(66) = 66$   $f(67) = 67$   $f(68) = 68$   $f(69) = 69$   $f(70) = 70$   $f(71) = 71$   $f(72) = 72$   $f(73) = 73$   $f(74) = 74$   $f(75) = 75$   $f(76) = 76$   $f(77) = 77$   $f(78) = 78$   $f(79) = 79$   $f(80) = 80$   $f(81) = 81$   $f(82) = 82$   $f(83) = 83$   $f(84) = 84$   $f(85) = 85$   $f(86) = 86$   $f(87) = 87$   $f(88) = 88$   $f(89) = 89$   $f(90) = 90$   $f(91) = 91$   $f(92) = 92$   $f(93) = 93$   $f(94) = 94$   $f(95) = 95$   $f(96) = 96$   $f(97) = 97$   $f(98) = 98$   $f(99) = 99$   $f(100) = 100$

$$m^2 - 4 < 0 \quad -2 < m < 2$$

سوال 4

بجواب 8

$$r - \frac{1}{nr} \geq 0$$

$$f(n) = \sqrt{r - \frac{1}{nr}}$$

سوال 4

$$\frac{rnr - 1}{nr} \geq 0$$

$$\begin{array}{c} + \quad | \quad - \quad | \quad + \\ \hline + \quad | \quad - \quad | \quad + \end{array}$$

$$n \geq \frac{1}{r} \cup n \leq -\frac{1}{r}$$

$$\frac{(rn-1)(rn+1)}{nr} \geq 0$$

$$\sqrt{mnr + rmm + 1}$$

m سوال 4 - V

سوال P

1)  $0 \leq 0$   $rnr - rn \leq 0$

$$\begin{array}{c} + \quad | \quad - \quad | \quad + \\ \hline + \quad | \quad - \quad | \quad + \end{array} \quad [0, 1]$$

2)  $m > 0$   $m_{\text{max}} \Rightarrow [0, 1]$

$$f(n) = \begin{cases} a + k \\ rnr - 1 \\ rn - 1 \\ rn + k \end{cases}$$

$n \neq 0$

$$n = \frac{1}{r}$$

$$g(n) = rn + 1$$

$$rn - 1 \neq 0 \quad n \neq \frac{1}{r}$$

سوال 8  $g(n)$  و  $f(n)$  مع

$$r + k = r \quad k = 0$$

$$r\left(\frac{1}{r}\right) + k = r\left(\frac{1}{r}\right) + 1$$

$$\frac{1}{r} + 0 = \frac{1}{r}$$

$$f(n) = \begin{cases} a - b \\ rnr - r \\ rn + r \\ rn + r \end{cases} \quad n \neq -\frac{r}{r}$$

$$n = -\frac{r}{r}$$

سوال 9  $g(n) = f(n)$  مع

$$g(n) = rn + b$$

$$rx - \frac{r}{r} + r\left(-\frac{r}{r}\right) = rx - \frac{r}{r} + b - r$$

$$\frac{(rn-r)(rn+r)}{rn+r} = rn - r = rn + b$$

$$b = -r$$

$$a = r$$

$$r(-r) = a$$

$$-ra - \frac{r}{r} = -r$$

$$f(n) = \begin{cases} rnr - r \\ rn - r \\ ra + an \\ rn + r \end{cases} \quad n \neq -\frac{r}{r}$$

$$n = r$$

$$g(n) = n + r$$

$$r = ra^r + ra$$

$$x(r) = r(a^r + a)$$

$$ar + a - r = 0$$

$$a = +1, -r$$