

$$2f(a) = f(2) + a$$

$$2(a+1) \rightarrow 2(va+v) = 1fa+1f = 3a-f+a$$

$$1fa - 3a = a = -f - 11$$

$$1.a = -11 \quad \boxed{a = -\frac{9}{5}}$$

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$$2-\sqrt{3} = A$$

$$2+\sqrt{3} = B$$

$$(A+B)^2 = (2-\sqrt{3}) + (2+\sqrt{3}) + 2 = f+2 = 4$$

$$A \times B = 1$$

$$A+B = \sqrt{4}$$

$$\frac{1}{\sqrt{2-\sqrt{3}}} + \frac{1}{\sqrt{2+\sqrt{3}}} = \sqrt{4}$$

$$\rightarrow \boxed{f+2\sqrt{4}}$$

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$$2f(m) - 3f(-n) = f n^2 - n$$

$$2f(-n) - 3f(m) = f n^2 + n$$

$$f(m) - 4f(-n) = 11n^2 - 2n$$

$$4f(-n) - 4f(m) = 12n^2 + 2n$$

$$-5f(m) = 10n^2 + n$$

$$\boxed{f(m) = -f n^2 - \frac{n}{5}}$$

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$$2f(0) = 3m - 1$$

$$\frac{1a+am}{4} = \frac{3m-1}{2 \times 2}$$

$$\frac{1a+am}{4} = \frac{3m-1}{4}$$

$$f(0) = \frac{3m-1}{2}$$

$$\frac{3 \times \frac{9}{2} - 1}{2} = \boxed{\frac{10}{2}}$$

$$1a+am = 3m-1$$

$$m = \frac{9}{2} \rightarrow 11 = f m$$

$$m = -2 \rightarrow 4f(0) = 14 + 2m + 3m - 1 \rightarrow 4f(0) = 1a+am \rightarrow f(0) = \frac{1a+am}{4}$$

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$$f(m) + f\left(\frac{1}{m}\right) = \frac{3m^2 - 12m + 3}{m}$$

$$f(-1) + f(-1) = \frac{3 \times 1 - 12 + 3}{-1} = -11$$

$$2f(-1) = -11$$

$$\boxed{f(-1) = -\frac{11}{2}}$$

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$f(n) = (n-1)\sqrt{1-n}$	$1-n \geq 0 \quad n \leq 1$		
$g(n) = -\sqrt{(1-n)^3}$	$(1-n)^3 \geq 0 \quad n \leq 1$	$(-\infty, 1]$	دامنه‌های عددی
$\downarrow$			
$-(1-n)\sqrt{1-n} = (n-1)\sqrt{1-n}$		$f(n) = g(n)$	برابر هستند

$f(n) = n\sqrt{n}$	$n \geq 0$		
$g(n) = \sqrt{n^3}$	$n^3 \geq 0 \rightarrow n \geq 0$		
$\downarrow$			
$\sqrt{n^3} \rightarrow n\sqrt{n}$		$f(n) = g(n)$	برابر هستند

$f(n) = [\sqrt{n} - \lfloor \sqrt{n} \rfloor]$	$n \geq 0$		
$g(n) = \sqrt{n - \lfloor n \rfloor}$	$n \geq 0$		دامنه‌های برابر
			مربع عدد صحیح منفی
		$f(n) = g(n)$	

الف) $f(1) = 2 \quad g(1) = 1$ $\frac{f(1)+g(1)}{f(1)-g(1)} = \frac{2+1}{2-1} = \boxed{3}$	ب) $f(2) = 3 \quad g(2) = 3$ $\frac{3+3}{3-3} = \frac{6}{0}$ تعریف نشده	ج) $f(0) = 0 \quad g(-1) = 1$ $0 \times 1 = 0$	9
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الف) $g(n) = f(2n-1)$ $2n-1 = 2 \quad n=1 \quad (1, 1)$ $2n-1 = -1 \quad n=0 \quad (0, 4)$ $2n-1 = 0 \quad n=\frac{1}{2} \quad (\frac{1}{2}, 5)$ $2n-1 = -2 \quad n=-\frac{1}{2} \quad (-\frac{1}{2}, 2)$ $2n-1 = 3 \quad n=\frac{4}{2} \quad (2, -1)$	ب) $h(n) = f(\lfloor n \rfloor)$ فقط دردی‌های غیر منفی $2, 0, 3$ $g(n) : \{ (2, 1), (-1, 4), (0, 5), (3, -1), (-2, 2) \}$ $\lfloor n \rfloor = 0 \quad n = 0 \quad h(0) = f(0) = 5$ $\lfloor n \rfloor = 2 \quad n = \pm 2 \quad h(2) = h(-2) = f(2) = 1$	10
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$g(n) = \{ (1, 1), (0, 4), (\frac{1}{2}, 5), (-\frac{1}{2}, 2), (2, -1) \}$ $\lfloor n \rfloor = 3 \quad n = \pm 3 \quad h(3) = h(-3) = f(3) = 1$