

N^o 1

$$\frac{2a}{a+b} + \frac{b}{a-b} = 2 \quad a^2 - b^2$$

$$(a-b)2a + (a+b)b = 2a^2 - 2b^2$$

$$2a^2 - 2ab + ab + b^2 = 2a^2 - 2b^2$$

$$-2ab + ab + b^2 = -2b^2$$

$$-ab + b^2 = -2b^2$$

$$-ab = -3b^2$$

$$a = \frac{-3b^2}{-b}$$

$$a = -3(-b)$$

$$a = 3b$$

$$\frac{3a-b}{a+5b} = \frac{3 \cdot 3b - b}{3b + 5b} = \frac{9b - b}{8b} = \frac{8b}{8b} = 1$$

$$b=1; a=3$$

$$b=2; a=6$$

$$\frac{3 \cdot 3 - 1}{3 + 5 \cdot 1} = \frac{8}{8} = 1$$

$$\frac{9 \cdot 6 - 2}{6 + 5 \cdot 2} = \frac{50}{16} = 1$$

Ж: ерестің 4 мүшесі бар.

N^o 2

1) 10000; 1+0+0+0+0=1

$$10000 \cdot 1 = 10000; 1 + 0 + 0 + 0 + 0 = 1$$

$$10000 \cdot 1 = 10000 \quad \checkmark$$

2) 10001; 1+0+0+0+1=2

$$10001 \cdot 2 = 20002; 2 + 0 + 0 + 0 + 2 = 4$$

$$20002 \cdot 4 = 80008 \quad \checkmark$$

3) 10002; 1+0+0+0+2=3

$$10002 \cdot 3 = 30006; 3 + 0 + 0 + 0 + 6 = 9$$

$$30006 \cdot 9 = 270054 \quad \times$$

Ж: 5 дұрыс жауап бар.

4) 11000; 1+1+0+0+0=2

$$11000 \cdot 2 = 22000; 2 + 2 + 0 + 0 + 0 = 4$$

$$22000 \cdot 4 = 88000 \quad \checkmark$$

5) 10100; 1+0+1+0+0=2

$$10100 \cdot 2 = 20200; 2 + 0 + 2 + 0 + 0 = 4$$

$$20200 \cdot 4 = 80800 \quad \checkmark$$

6) 10010; 1+0+0+1+0=2

$$10010 \cdot 2 = 20020; 2 + 0 + 0 + 2 + 0 = 4$$

$$20020 \cdot 4 = 80080 \quad \checkmark$$

N^o 3

$$2f(x) + f(1-x) = x^2; x \in \mathbb{R}$$