4. Given  $a=-2+3x^2$  and  $d=\frac{1}{-2+3x}$ , which of the following is correct:

$$a+d = \frac{3(x+1)(3x^2-x-1)}{3x+2} \quad a \times d = \frac{3x^2-2}{3x+2}$$

$$a-d = \frac{9x^3+6x^2-6x-5}{3x+2} \quad \frac{a+d}{a-d} = \frac{(3x+2)(9x^3-6x^2-6x+5)}{3(3x-2)(3x^3+2x^2+2x+1)}$$

$$\frac{a+d}{a-d} = \frac{(x+1) (3 x-2) (3 x^2-x-1)}{(x-1) (3 x+2) (3 x^2+x-1)} \quad a+d = \frac{9 x^3+6 x^2+6 x+5}{3 x+2}$$

$$a \times d = \frac{3 x^2+2}{3 x+2} \quad a-d = \frac{3 (3 x^3+2 x^2+2 x+1)}{3 x+2}$$

$$a \times d = \frac{3 x^2 - 2}{3 x - 2} \qquad a - d = \frac{3 (x - 1) (3 x^2 + x - 1)}{3 x - 2}$$

$$a + d = \frac{9 x^3 - 6 x^2 - 6 x + 5}{3 x - 2} \qquad \frac{a + d}{a - d} = \frac{9 x^3 - 6 x^2 - 6 x + 5}{3 (x - 1) (3 x^2 + x - 1)}$$

$$a+d = \frac{3 \left(3 x^3 - 2 x^2 + 2 x - 1\right)}{3 x - 2} \qquad a-d = \frac{9 x^3 - 6 x^2 + 6 x - 5}{3 x - 2}$$

$$\frac{a+d}{a-d} = \frac{(3 x - 2) \left(9 x^3 + 6 x^2 + 6 x + 5\right)}{3 (x - 1) (3 x + 2) \left(3 x^2 + x - 1\right)} \qquad a \times d = \frac{3 x^2 + 2}{3 x - 2}$$

## Solution