1. D

2. A

3. A

4. C

5. The expression is undefined every time we divide by 0. This is possible in two different cases:

1st Case:

$$\begin{aligned} x + \frac{2005}{x+2006} &= 0 \\ x(x+2006) + 2005 &= 0 \\ x^2 + 2006x + 2005 &= 0 \\ (x+2005)(x+1) &= 0 \\ x &= -1, -2005 \end{aligned}$$

2nd Case:

$$\begin{aligned} x + 2006 &= 0 \\ x &= -2006 \end{aligned}$$

This gives us 3 possible values $x = -1, -2005, -2006$. C

6. B

7. A

8. D

9. We first find the prime factorization of the preceding (third) term of the sequence, $64 = 2^6$. Then the fourth term is the product of all positive integer factors of 2^5. We can list them: $2^0, 2^1, 2^2, 2^3, 2^4, 2^5, 2^6$. The product of them is $2^0 \cdot 2^1 \cdot 2^2 \cdot 2^3 \cdot 2^4 \cdot 2^5 \cdot 2^6 = 2^{(0+1+2+3+4+5+6)} = 2^{21}$. B

10. A