POP QUIZ
Simplify the equation of Index and Logarithmic

Choose the correct answer for the following solution of simplify index and logarithmic.

1 The solution for simplify

$$\frac{a^{10-5n}}{a^{3n} \times a^{4n+2}}$$

$$= \frac{a^{10-5n}}{a^{3n+(4n+2)}}$$

$$= \frac{a^{10-5n}}{a^{7n+2}}$$

$$= a^{10-5n-(7n+2)}$$

$$= a^{8-12n}$$

a. **True**

b. **False**

2 The solution for simplify

$$4 - 2\log_a 3 + \log_a 6$$

$$= 4\log_a a - 2\log_a 3 + \log_a 6$$

$$= \log_a a^4 - \log_a 3^2 + \log_a 6$$

$$= \log_a \left(\frac{a^4 \times 6}{3^2}\right)$$

$$= \log_a \left(\frac{2a^4}{3}\right)$$

a. **True**

b. **False**

3 The solution for simplify

$$7^{2n-1} \times 343^{5n} \div 49^{3n-2}$$

$$= 7^{2n-1} \times 7^{3(5n)} \div 7^{2(3n-2)}$$

$$= 7^{2n-1} \times 7^{15n} \div 7^{6n-4}$$

$$= 7^{2n-1+15n-6n-4}$$

$$= 7^{11n-5}$$

a. **True**

b. **False**