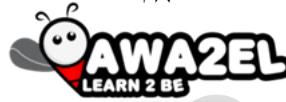




السؤال الأول:

حل المعادلات الآتية :

$$18 = 6^{1+s^2} \times 2^{2-s^2} \quad (1)$$



$$2 \text{ لو } 2 - \text{ لو } 3 = (8 + 3^s) = 1 \quad (2)$$

الإجابة

$$18 = 6^{1+s^2} \times 2^{2-s^2} \quad (1)$$

$$2 \times 3 = 2^{2-s^2} \times 6^{1+s^2}$$

$$2 \times 3 = 2^{2-s^2} \times 2^{1+s^2} \times 3^{1+s^2}$$

$$2 \times 3 = 2^{1+s^2} \times 3^{1+s^2}$$

$$2 \times 3 = 2^{1+s^2} \times 3^{1+s^2} \quad \leftarrow 2 = 1 + s^2 \quad \leftarrow \text{س} = \frac{1}{2}$$

(2)

$$2 \text{ لو } 2 - \text{ لو } 3 = (8 + 3^s) = 1$$

$$\text{لو } 2 - \text{ لو } 3 = (8 + 3^s) = 1$$

$$\text{لو } 2 = \frac{3^s}{(8 + 3^s)} \quad \leftarrow 1 = \frac{3^s}{(8 + 3^s)} = 1$$

$$2 \text{ س} = 16 + 3 \text{ س}$$

$$\text{س} - 3 \text{ س} = 16 - 2 \text{ س}$$

$$\text{س} = 8, \text{ س} = -2 \text{ (تُهمل)}$$

$$\therefore \text{س} = 8$$

السؤال الثاني:

بسّط المقدار الآتي :

$$\frac{\frac{2}{3}}{2 \times 6}$$

الإجابة:

$$\frac{2 \times \frac{2}{3} \times \frac{2}{3}}{\frac{1}{3}(2 \times 3)} = \frac{2 \times \frac{2}{3} (2 \times 3)}{\frac{1}{3} 6} = \frac{2 \times \frac{2}{3}}{\frac{6}{3}} = \frac{\frac{4}{3}}{2} = \frac{\frac{4}{3} \times \frac{1}{2}}{2 \times \frac{1}{2}} = \frac{\frac{4}{6}}{1} = \frac{2}{3}$$



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