

Question #75291, Math / Algebra

A company analyses its profits for four consecutive years, from 2007 – 2010. The profit made in 2007 was twice that in 2009. The profit made in 2008 was R 14 million more than the profit made in 2009, while the profit made in 2010 was R 4 million less than the profit made in 2007. If the total profit made in these four years was R 58 million, determine the profit made in each year.

Solution:

Let the profit made in 2008 was R x million. Then the profit made in 2009 was $x/2$.

The profit made in 2008 was R 14 million more than the profit made in 2009, it means: $x/2 + R 14$ million. And the profit made in 2010 was R 4 million less than the profit made in 2007, it means: $x - R 4$ million. At last, the total profit made in these four years was R 58 million, it means: $x + x/2 + R 14$ million + $x/2 + x - R 4$ million = R 58 million.

$$3x + R 10 \text{ million} = R 58 \text{ million};$$

$$3x = R 48 \text{ million};$$

$$x = R 16 \text{ million};$$

In this way, the profit made in 2007 was R 16 million, the profit made in 2008 was R 22 million, the profit made in 2009 was R 8 million, and the profit made in 2010 was R 12 million.

Answer:

The profit made in 2007 was R 16 million, the profit made in 2008 was R 22 million, the profit made in 2009 was R 8 million, and the profit made in 2010 was R 12 million.

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