

Question#14824

Chelsea went for a walk. At the beginning of her walk, she was traveling 2.3 m/s. Then she began to jog to reach a maximum speed of 4.2 m/s over a 15 second period. Assume that Chelsea's acceleration was constant.

Solution:

Let:

$$v_1 = 2.3 \text{ m/s}$$

$$v_2 = 4.2 \text{ m/s}$$

$$t = 15 \text{ s}$$

$$a = ?$$

$$a = \frac{v_2 - v_1}{t};$$

$$a = \frac{4.2 - 2.3}{15} = 0.13 \text{ m/s}^2$$