Grade 8 Mathematics Worksheet

Equations and rates

Questions:

1. Scientist Justice is studying a glacier that is moving in the same direction at a rate of 50 meters every three years. He wrote down the following equations to represent the distance (D), in metres, that the glacier will move in *y* years. Can you tell him which one is correct?

    A) $D = \frac{y}{3} + 50$

    B) $D = \frac{50}{3} y$

    C) $D = \frac{3}{50} y$

    D) $D = \frac{y}{3} - 50$

Solution

1. The glacier moves 50 m every 3 years. So in 1 year it will move 50 divided by 3 metres. If the measure runs over y years, then we have to take the product of the rate per year and the number of years. So $D = \frac{50}{3} y$. The answer is thus (B).

Forming the yearly rate from a rate that was given for a period of three years.