



15. Professor Rosseforp runs to work every day. On Thursday he ran 10% faster than his usual average speed. As a result, his journey time was reduced by  $x$  minutes. How many minutes did the journey take on Wednesday?
- A  $11x$                       B  $10x$                       C  $9x$                       D  $8x$                       E  $5x$

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15. A Let Professor Rosseforp's usual journey take  $t$  minutes at an average speed of  $v$  metres/minute. Then the distance to work is  $vt$  metres. On Thursday his speed increased by 10%, i.e. it was  $11v/10$  metres/minute. The time taken was  $(t - x)$  minutes. Therefore  $11v/10 \times (t - x) = vt$ . So  $11(t - x) = 10t$ , i.e.  $t = 11x$ .