

Solution 1.59

The simple interest rate per year that will accumulate the same amount of money in 2 years as a compound interest rate of 20% per year is closest to:

- (a) 20.5%
- (b) 21%
- (c) 22%
- (d) 23%

Solution:

F in year 2 at 20% compound interest = $P(1.20)(1.20) = 1.44P$

For simple interest, $F = P + Pni = P(1 + ni)$

$$P(1 + 2i) = 1.44P$$

$$(1 + 2i) = 1.44$$

$$i = 22\%$$

Answer is (c)