**Question:** What is the **beta** ($β$) of the below portfolio?

|  |
| --- |
| Portfolio Details |
| Stock | Expected return | Standard deviation | Covariance | Beta | Dollars invested |
| A | 0.2 | 0.4 | 0.12 | 0.5 | 40 |
| B | 0.3 | 0.8 | 1.5 | 80 |
|   |   |   |   |   |   |

(a) 0.75

(b) 0.833333333

(c) 1

(d) 1.166666667

(e) 1.4

**Answer:** d

$$β\_{P}=x\_{1}β\_{1}+x\_{2}β\_{2}+…+x\_{n}β\_{n}$$

$$β\_{P}=x\_{A}β\_{A}+x\_{B}β\_{B}$$

$$ =\frac{40}{40+80}×0.5+\frac{80}{40+80}×1.5$$

$$ =1.166666667$$