

(b) : Given, $|A| = \frac{1}{2}$, $\text{trace}(A) = 3$

$$B = \text{adj}(\text{adj}(2A)) \quad [\because \text{adj}(\text{adj}A) = |A|^{n-2} A]$$

$$= |2A|^{3-2} (2A) = 2^3 |A|(2A) = 8A$$

$$\Rightarrow \text{trace}(B) = 8 \text{trace}(A) = 8 \times 3 = 24$$

$$\text{Hence, } |B| + \text{trace}(B) = 8^3 |A| + 24 = \frac{8^3}{2} + 24 = 280$$