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MATH 201

- (1) Empty Set: This is a set that has no element in it.
- (ii) Singleton set: This is a set that has only one element or a single element in it.

(2) $\text{Im}(A/B)$

$$\frac{2+7i}{9-5i} \quad \text{where } i^2 = -1$$

$$\frac{2+7i}{9-5i} \times \frac{9+5i}{9+5i}$$

$$= \frac{18 + 10i + 63i + 35i^2}{9^2 - (5i)^2}$$

$$= \frac{18 + 73i - 35}{81 + 25}$$

$$= \frac{-35 + 18 + 73i}{106}$$

$$= \frac{-17 + 73i}{106}$$

$$\therefore \text{Im}(A/B) = +73i//$$