

$$1) \frac{2 + 2j}{1 + j} = \frac{2 \cdot 1 + 2 \cdot j}{1 + j}$$

rewrite the top neatly so you can see it's $2 \cdot 1$ and $2 \cdot j$

$$= \frac{2(1 + j)}{1 + j}$$

factor the 2 out

$$= 2(1) = 2$$

$$\frac{1 + j}{1 + j} = 1, \text{ so only } 2 \text{ remains}$$