$$\sin(1+i) = \left\{ \sin z = \frac{e^{iz} - e^{-iz}}{2i} \right\} =$$

$$= \frac{e^{i(1+i)} - e^{-i(1+i)}}{2i} = \frac{e^{i-1} - e^{1-i}}{2i} =$$

$$= \left\{ e^{z} = e^{x}(\cos y + i \sin y) \right\} =$$

$$= \frac{e^{-1}(\cos 1 + i \sin 1) - e^{1}(\cos 1 - i \sin 1)}{2i} =$$

$$= \frac{e^{-1}\cos 1 + i e^{-1}\sin 1 - e^{1}\cos 1 + i e^{1}\sin 1}{2i} =$$

$$= \frac{e^{-1}\cos 1 - e^{1}\cos 1 + i e^{-1}\sin 1 + i e^{1}\sin 1}{2i} =$$

$$= \frac{\cos 1\,(e^{-1} - e^{1})}{2i} + \frac{\cancel{i}\sin 1\,(e^{-1} + e^{1})}{2\cancel{i}} =$$

$$= \frac{\cos 1 \cdot i\,(e^{1} - e^{-1})}{2} + \sin 1 \cosh 1 =$$

$$= i \cos 1 \sinh 1 + \sin 1 \cosh 1$$