1) Tan $1°$ Tan $2°$ tan $3°$ ... tan $89° =$

$$\tan x = \frac{1}{\cot x}$$

$$1 = \tan x \cdot \cot x$$

$$1 = \tan x \cdot \tan (90° - x)$$

$$1 = \tan x \cdot \tan (90° - x)$$

$$1 = \tan 1° \cdot \tan (90° - 1) = \tan 1° \cdot \tan 89°$$

$$1 = \tan 2° \cdot \tan 88°$$

$$\Rightarrow 1 \times 1 \times 1 \ldots \times 1 = 1$$

2) Jika $\sin (5a + 42) = \cos (10 - 3a)$, tentukanlah nilai a!

$$\sin (5a + 48°) = \cos (10° - 3a)$$

$$\sin (5a + 48°) = \sin (90 - 10° + 3a)$$

$$5a + 48° = 80° + 3a$$

$$2a = 32°$$

$$a = 16°$$

3) Tentukanlah nilai n jika diketahui $4 \sin 290° + 2 \cos 520° - n \cos 20° = 0$

$$4 \sin (360° - 70°) + 2 \cos (360° + 160°) - n \cos (90° - 70°) = 0$$

$$4 \cdot (-\sin 70°) + 2 \cos (160°) - n \sin 70° = 0$$

$$4 (-\sin) 70° + 2 \cos (90° + 70°) - n \sin 70° = 0$$

$$- 4 \sin 70° + 2 (-\sin 70°) - n \sin 70° = 0$$

$$- 4 \sin 70 - 2 \sin 70° - n \sin 70 = 0$$

$$-4 - 2 - n = 0$$

$$-6 = n$$

$$n = -6$$