SOLUCIONES DE LA UNIDAD 3: TRIGONOMETRÍA II REPASANDO

Relaciones trigonométricas	
1a	Sen105° = $\frac{\sqrt{2}+\sqrt{6}}{4}$ cos105° = $\frac{\sqrt{2}-\sqrt{6}}{4}$
1b	Sen135° = $\frac{\sqrt{2}}{2}$ cos135° = $\frac{-\sqrt{2}}{2}$
1c	Sen285° = $\frac{-\sqrt{6}-\sqrt{2}}{4}$ cos285° = $\frac{\sqrt{6}-\sqrt{2}}{4}$
1d	Sen210° = $\frac{-1}{2}$ cos210° = $\frac{-\sqrt{3}}{2}$
1e	Sen165° = $\sqrt{\frac{2-\sqrt{3}}{2}}$ cos165° = $-\sqrt{\frac{2+\sqrt{3}}{2}}$
1f	Sen22,5° = $\sqrt{\frac{2-\sqrt{2}}{2}}$ cos22,5° = $\sqrt{\frac{2+\sqrt{2}}{2}}$
2	a) sen$(\alpha+\beta)$ = $\frac{-3\sqrt{21}+8}{25}$ cos$(\alpha+\beta)$ = $\frac{-4\sqrt{21}-6}{25}$ b) sen$(\alpha-\beta)$ = $\frac{-3\sqrt{21}-8}{25}$ cos$(\alpha-\beta)$ = $\frac{-4\sqrt{21}+6}{25}$ c) Sen2α = $\frac{24}{25}$ cos2α = $\frac{7}{25}$ d) sen(2β) = $\frac{-4\sqrt{21}}{25}$ cos(2β) = $\frac{17}{25}$ e) Sen$\frac{\alpha}{2}$ = $\frac{\sqrt{10}}{10}$ cos$\frac{\alpha}{2}$ = $\frac{3\sqrt{10}}{10}$ f) Sen$\frac{\beta}{2}$ = $\sqrt{\frac{5+\sqrt{21}}{10}}$ cos$\frac{\beta}{2}$ = $\sqrt{\frac{5-\sqrt{21}}{10}}$
3	a) sen2$\alpha = \frac{40}{41}$ b) sen2$\beta = \frac{-21}{29}$ c) sen$(\alpha+\beta) = \frac{-13\sqrt{2378}}{2378}$ d) cos$(\alpha-\beta) = \frac{-23\sqrt{2378}}{2378}$ e) cos2$\alpha = \frac{9}{41}$ f) sec2$\beta = \frac{29}{20}$ g) cos$(\alpha+\beta) = \frac{-47\sqrt{2378}}{2378}$ h) tg$(\alpha+\beta) = \frac{13}{47}$ i) tg2$\alpha = \frac{40}{9}$ j) tg2$\beta = \frac{-21}{20}$ k) sen$(\alpha-\beta) = \frac{-43\sqrt{2378}}{2378}$ l) cotg$(\alpha+\beta) = \frac{47}{13}$
5	a) x = -120° + K720° x = 480° + K720° b) x = 90° + K360° = $\pi/2$ + 2Kπ x = 270° + K360° = $3\pi/2$ + 2Kπ c) x = 90° + K360° = $\pi/2$ + 2Kπ d) x = -90° + K540° x = 180° + K540° e) x = 0° + K180° x = 90° + K180° x = 30° + K180° x = 150° + K180° f) x = 30° + K360° = $\pi/6$ + 2Kπ x = 150° + K360° = $5\pi/6$ + 2Kπ x = 270° + K360° = $3\pi/2$ + 2Kπ g) x = 0° + K360° = 0 + 2Kπ x = 180° + K360° = π + 2Kπ x = 30° + K360° = $\pi/6$ + 2Kπ x = 150° + K360° = $5\pi/6$ + 2Kπ x = 210° + K360° = $7\pi/6$ + 2Kπ x = 330° + K360° = $11\pi/6$ + 2Kπ h) x = 60° + K360° = $\pi/3$ + 2Kπ x = 300° + K360° = $5\pi/3$ + 2Kπ
6	A = 51° 19´ = C B = 77° 21´
7	El faro está a 59,59 m
8	Está a 3,38 km
9	El avión está a 45,2 km de altura, está a 66,27 km de Málaga y a 93,22 km de Cádiz.

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