

Correction : mesure principale d'un angle orienté

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Exercice

a) $\frac{46\pi}{5} = \frac{46\pi}{5} - 5 \times 2\pi = \frac{46\pi}{5} - 5 \times \frac{10\pi}{5} = \frac{46\pi}{5} - \frac{50\pi}{5} = -\frac{4\pi}{5} [2\pi].$

La mesure principale de $\frac{46\pi}{5}$ est $\boxed{-\frac{4\pi}{5}}$.

b) $\frac{14\pi}{3} = \frac{14\pi}{3} - 2 \times 2\pi = \frac{14\pi}{3} - 2 \times \frac{6\pi}{3} = \frac{14\pi}{3} - \frac{12\pi}{3} = \frac{2\pi}{3} [2\pi].$

La mesure principale de $\frac{14\pi}{3}$ est $\boxed{\frac{2\pi}{3}}$.

c) $-\frac{27\pi}{6} = -\frac{27\pi}{6} + 2 \times 2\pi = -\frac{27\pi}{6} + 2 \times \frac{12\pi}{6} = -\frac{27\pi}{6} + \frac{24\pi}{6} = -\frac{3\pi}{6} = -\frac{\pi}{2} [2\pi].$

La mesure principale de $-\frac{27\pi}{6}$ est $\boxed{-\frac{\pi}{2}}$.

d) $-\frac{45\pi}{2} = -\frac{45\pi}{2} + 11 \times 2\pi = -\frac{45\pi}{2} + 11 \times \frac{4\pi}{2} = -\frac{45\pi}{2} + \frac{44\pi}{2} = -\frac{\pi}{2} [2\pi].$

La mesure principale de $-\frac{45\pi}{2}$ est $\boxed{-\frac{\pi}{2}}$.

e) $\frac{4\,007\pi}{4} = \frac{4\,007\pi}{4} - 501 \times 2\pi = \frac{4\,007\pi}{4} - 501 \times \frac{8\pi}{4} = \frac{4\,007\pi}{4} - \frac{4\,008\pi}{4} = -\frac{\pi}{4} [2\pi].$

La mesure principale de $\frac{4\,007\pi}{4}$ est $\boxed{-\frac{\pi}{4}}$.

f) $-\frac{218\pi}{3} = -\frac{218\pi}{3} + 36 \times 2\pi = -\frac{218\pi}{3} + 36 \times \frac{6\pi}{3} = -\frac{218\pi}{3} + \frac{216\pi}{3} = -\frac{2\pi}{3} [2\pi].$

La mesure principale de $-\frac{218\pi}{3}$ est $\boxed{-\frac{2\pi}{3}}$.