

Omn 12, page 199, nos 27, 29, 30, 33, 34, 41, 53ab

Écris la valeur exacte de chaque expression.

$$27. \sin \frac{3\pi}{4} = \sin \frac{3(180^\circ)}{4} = \sin 135^\circ = \frac{\sqrt{2}}{2}$$

$$29. \cos 150^\circ = \frac{-\sqrt{3}}{2}$$

$$30. \cot \text{an} \frac{7\pi}{6} = \frac{\cos \frac{7(180^\circ)}{6}}{\sin \frac{7(180^\circ)}{6}} = \frac{\cos 210^\circ}{\sin 210^\circ} = \frac{\frac{-\sqrt{3}}{2}}{\frac{1}{2}} = -\sqrt{3}$$

$$33. \operatorname{cosec} \frac{-5\pi}{6} = \frac{1}{\sin -150^\circ} = \frac{1}{\frac{-1}{2}} = -2$$

$$34. \tan \frac{10\pi}{3} = \frac{\sin 600^\circ}{\cos 600^\circ} = \frac{\frac{-\sqrt{3}}{2}}{\frac{-1}{2}} = \sqrt{3}$$

Écris la valeur approximative de chaque expression, au dix-millième près.

$$41. \sin \left( \frac{-\pi}{4} \right) = \sin(-45^\circ) = -0,7071$$

53. Détermine la valeur de chaque expression.

$$a) \log_2 \left( \sin \frac{\pi}{4} \right) = \log_2 \left( \frac{\sqrt{2}}{2} \right) = \log_2 \left( \frac{2^{\frac{1}{2}}}{2} \right) = \log_2 \left( 2^{\frac{1}{2}-1} \right) = \log_2 \left( 2^{\frac{-1}{2}} \right) = \frac{-1}{2}$$

$$b) \log_5 (\cos 2\pi) = \log_5 (1) = \log_5 (5^0) = 0$$