

$$(a) \log_2 32,$$

$$(b) \log_3 \frac{1}{81},$$

$$(c) \log_4 8,$$

$$(d) \log_3 \frac{3}{5} + \log_9 \frac{25}{9},$$

$$(e) \log_4 \frac{a^5 b^9}{c^6},$$

$$(f) \log_3 \sqrt{2\sqrt{8\sqrt{20}}},$$

$$(g) \log \left( \sqrt[3]{\frac{1}{a^2}} \cdot \sqrt[4]{\frac{1}{b^2}} \right),$$

$$(h) 10^{-\log 8},$$

$$(i) 10^{1-\log 2},$$

$$(j) \log_{\sqrt[3]{5}} 7 \cdot \log_{\sqrt{7}} 125,$$

$$(k) \log_2 12 \cdot \log_{12} 22 \cdot \log_{22} 32.$$

$$(a) \left[ 4^{-\frac{1}{4}} + \left( \frac{1}{2^{-\frac{3}{2}}} \right)^{-\frac{4}{3}} \right] \cdot \left[ 4^{-\frac{1}{4}} + (2\sqrt{2})^{-\frac{4}{3}} \right],$$

$$(b) \left[ 9^{-\frac{1}{4}} + (3\sqrt{3})^{-\frac{4}{3}} \right] \cdot \left[ 9^{-\frac{1}{4}} - (3\sqrt{3})^{-\frac{4}{3}} \right],$$

$$(c) \left[ \left( 4 + 7^{\frac{1}{2}} \right)^{\frac{1}{2}} + \left( 4 - 7^{\frac{1}{2}} \right)^{\frac{1}{2}} \right]^2,$$

$$(d) \left[ 12^{\frac{5}{8}} + \left( \frac{1}{3} \right)^{-2} \cdot \left( 2 \cdot 3^{-1} - 9^{-\frac{1}{2}} \right) \right]^{\frac{1}{3}},$$

$$(e) \left[ \left( 3 - 5^{\frac{1}{2}} \right)^{\frac{1}{2}} - \left( 3 + 5^{\frac{1}{2}} \right)^{\frac{1}{2}} \right]^2,$$

$$(f) \left[ 3 \cdot 2^{\frac{2}{3}} - \frac{2}{3} \left( 2^{\frac{5}{3}} - 2^{-\frac{1}{3}} \right) \right] : 16^{\frac{5}{3}}.$$

$$(a) 105^\circ$$

$$(c) 165^\circ$$

$$(e) 315^\circ$$

$$(b) 140^\circ$$

$$(d) 710^\circ$$

$$(f) 240^\circ$$

$$(a) \frac{7\pi}{12}$$

$$(c) \frac{9\pi}{2}$$

$$(e) \frac{11\pi}{12}$$

$$(b) \frac{4\pi}{3}$$

$$(d) \frac{7\pi}{12}$$

$$(f) \frac{31\pi}{18}$$

$$(a) \arcsin \frac{-\sqrt{3}}{2},$$

$$(c) \operatorname{arctg} 1,$$

$$(e) \arcsin \frac{1}{2},$$

$$(g) \arcsin \left( \sin \frac{\pi}{3} \right),$$

$$(i) \sin \left( \arcsin \frac{1}{2} \right),$$

$$(k) \sin \left( \operatorname{arctg} \sqrt{3} + \arccos \left( -\frac{1}{2} \right) \right),$$

$$(b) \arccos \frac{\sqrt{2}}{2},$$

$$(d) \operatorname{arcctg} (-\sqrt{3}),$$

$$(f) \arcsin \frac{-\sqrt{3}}{3},$$

$$(h) \arcsin \left( \sin \frac{2\pi}{3} \right),$$

$$(j) \sin \left( \arcsin \frac{3}{2} \right),$$

$$(l) \cos \left( 2 \operatorname{arctg} (-1) + 3 \arcsin \frac{\sqrt{2}}{2} \right).$$