

Mathematics 2204

Exact Values

1. Evaluate:

a) $R_{210^\circ}(1,0)$

b) $R_{120^\circ}(1,0)$

c) $R_{-960^\circ}(1,0)$

d) $R_{300^\circ}(1,0)$

e) $R_{-1470^\circ}(1,0)$

f) $R_{148^\circ}(1,0)$

g) $R_{190^\circ}(1,0)$

h) $R_{-660^\circ}(1,0)$

2. Evaluate each of the trigonometric expressions, giving exact answers in lowest terms.

a) $\frac{\sin 45^\circ}{\cos 60^\circ}$

b) $\frac{2\sin 30^\circ}{\sin 150^\circ}$

c) $\frac{-3\sin 120^\circ}{\cos 240^\circ}$

d) $\cos^2 150^\circ$

e) $\sin^2 180^\circ + 3\cos(-45^\circ)$

f) $\frac{\cos 30^\circ}{\sin 45^\circ} + \frac{\sin 30^\circ}{\cos 45^\circ}$

g) $\frac{\cos -180^\circ}{\sin^2 270^\circ}$

h) $\sin 210^\circ \cos(-300^\circ) + \cos 0^\circ \sin 135^\circ$

i) $\frac{\sin 90^\circ - 2\cos 240^\circ}{\sin 420^\circ}$