

Name : .....

# Trigonometric Ratios of Special Angles Worksheet

Determine the exact values of the following

a)  $\sec^2 45^\circ \csc^2 45^\circ - 1$

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b)  $\sin 30^\circ \tan 45^\circ + \tan 30^\circ \sin 60^\circ$

\_\_\_\_\_

c)  $\cos 30^\circ \sin 45^\circ + \sin 30^\circ \tan 30^\circ$

\_\_\_\_\_

d)  $2 \sin 30^\circ \cos 30^\circ$

\_\_\_\_\_

e)  $\sin 30^\circ \cos 30^\circ + \sin 60^\circ \cos 60^\circ$

\_\_\_\_\_

f)  $\tan 45^\circ - \frac{\sin 45^\circ}{\cos 45^\circ}$

\_\_\_\_\_

g)  $\sin 60^\circ \cos 30^\circ + \sin 30^\circ \cos 60^\circ$

\_\_\_\_\_

h)  $\sin 30^\circ + \cos 60^\circ + \sec 60^\circ$

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## Answers

a)  $\sec^2 45^\circ \csc^2 45^\circ - 1$

3

b)  $\sin 30^\circ \tan 45^\circ + \tan 30^\circ \sin 60^\circ$

1

c)  $\cos 30^\circ \sin 45^\circ + \sin 30^\circ \tan 30^\circ$

$\frac{3\sqrt{6} + 2\sqrt{3}}{12}$

d)  $2\sin 30^\circ \cos 30^\circ$

$\frac{\sqrt{3}}{2}$

e)  $\sin 30^\circ \cos 30^\circ + \sin 60^\circ \cos 60^\circ$

$\frac{\sqrt{3}}{2}$

f)  $\tan 45^\circ - \frac{\sin 45^\circ}{\cos 45^\circ}$

0

g)  $\sin 60^\circ \cos 30^\circ + \sin 30^\circ \cos 60^\circ$

1

h)  $\sin 30^\circ + \cos 60^\circ + \sec 60^\circ$

3