# Chapter 5 Mid-Chapter Review Extra Practice

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**1.** Determine the reciprocal trigonometric ratio.

**a)** $\tan\theta = \frac{14}{9}$

**b)** $\sin\theta = \frac{5}{12}$

**c)** $\cos\theta = \frac{1}{2}$

**d)** $\sin\theta = \frac{4}{7}$

**2.** Determine the value of $\theta$ to the nearest degree if $0° \leq \theta \leq 90°$.

**a)** $\csc\theta = 3.579$

**b)** $\cot\theta = 0.667$

**c)** $\sec\theta = 2.154$

**d)** $\tan\theta = 6.872$

**3.** Determine the exact value of each expression.

**a)** $\sin 45° \times \cos 45°$

**b)** $2\cos 60° \times \sin 30°$

**c)** $\tan^2 45° \times \tan^2 30°$

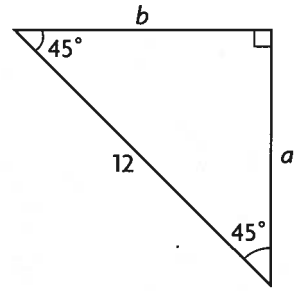
**d)** $\sin^2 45° + \cos^2 45°$

**4.** Determine:

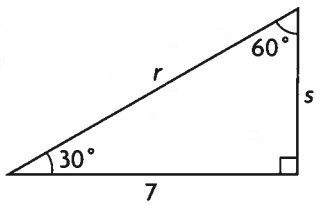
**i)** The exact measure of each unknown side.

**ii)** The exact area of each triangle.

**a)**




**b)**




**5.** State all equivalent values of $\theta$ if $0° \leq \theta \leq 360°$.

**a)** $\sin 180°$

**b)** $\tan 135°$

**c)** $\cos 300°$

**d)** $\tan 210°$

**6.** Determine the exact value of the given trigonometric ratio.

**a)** $\sin 135°$

**b)** $\tan 315°$

**c)** $\sin 330°$

**d)** $\cos 240°$

**7.** Given a trigonometric ratio in quadrant 3, determine:

**i)** the exact values of $x$, $y$, and $r$.

**ii)** the value of the $\theta$ to the nearest degree if $0° \leq \theta \leq 360°$

**a)** $\tan\theta = \frac{8}{4}$

**b)** $\sin\theta = -\frac{13}{17}$

**c)** $\cos\theta = -\frac{8}{11}$

**d)** $\sec\theta = -\frac{12}{5}$

**e)** $\csc\theta = -\frac{6}{4}$

**f)** $\cot\theta = \frac{1}{5}$

**8.** Given a point on the terminal arm of an angle $\theta$, state:

**i)** the value of the principal angle $\theta$ to the nearest degree if $0° \leq \theta \leq 360°$.

**ii)** the value of the acute angle $\beta$ to the nearest degree

**a)** $(12, 20)$

**b)** $(-3, 4)$

**c)** $(9, -3)$

**d)** $(-14, -15)$

**e)** $(1, -11)$

**f)** $(-2, 5)$