Name: _____ Date: _____

4.3 Reciprocal Trigonometric Ratios

BLM 4–7

1. Determine the measure of each angle, to the nearest degree, if the angles are in the first quadrant.

a) $\cot A = 7$

b) $\sec B = \frac{7}{3}$

c) $\csc C = \frac{11}{8}$

2. The point A(−40, −9) lies on the terminal arm of an angle in standard position. Determine the exact expression for the six trigonometric ratios of the angle.

3. Using the unit circle, determine the two angles between 0° and 360° for which $\sec B = \sqrt{2}$.

4. Explain why there is no angle in the second quadrant that has $\csc A = -\frac{7}{5}$.

5. Find the two angles between 0° and 360° that have

a) a cosecant of 3

b) a cotangent of –4

c) a secant of –2

6. In $\triangle ABC$, if $a = 10$, $b = 24$, and $\angle C = 90°$, determine the exact expressions for the six trigonometric ratios for $\angle B$.

7. Assume $\csc B = \frac{k+2}{k-2}$ and $\angle B$ is in the second quadrant.

a) Find the expression for cos B.

b) What are the restrictions on k?

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