

Math 141-142
Fall 1999
Trigonometry Final Exam Answers

1. $-\sqrt{3}$

2. $\frac{3}{2}$

3. 39°

4. 553 feet

5. c

6. $\frac{2}{\sqrt{5}}$

7. b

8. 1.23, 4.37

9. $a = -4$, $B = \frac{2\pi}{1.5}$

10. $\frac{4}{5}$

11. c

12. $\frac{2\pi}{3}$, $\frac{4\pi}{3}$

13. $-\frac{33}{65}$

14.

$$\frac{\sec x \csc x}{2 \cot x - \sec x \csc x} = \frac{\frac{1}{\cos x \sin x}}{\frac{2 \cos x}{\sin x} - \frac{1}{\cos x \sin x}} = \frac{\frac{1}{\cos x \sin x}}{\frac{2 \cos^2 x - 1}{\cos x \sin x}} = \frac{1}{2 \cos^2 x - 1} = \frac{1}{\cos 2x} = \sec 2x$$

15. 70 feet

16. 180°