WebAssign
Hw 11 (7.3): Trigonometric Substitutions (Homework)

Yinglai Wang
MA 162 Spring 2012, section 321, Spring 2012
Instructor: Jonathan Montano

Current Score : 20 / 20 **Due :** Thursday, February 9 2012 11:55 PM EST

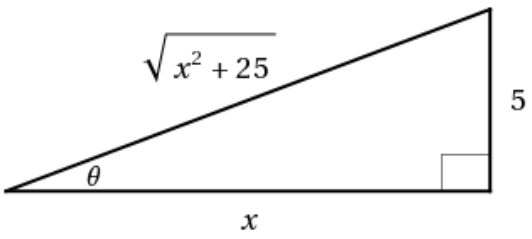
1. 3.33/3.33 points | Previous Answers SCalcET7 7.3.002.

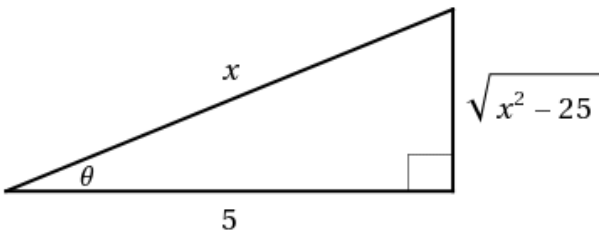
Evaluate the integral using the indicated trigonometric substitution.

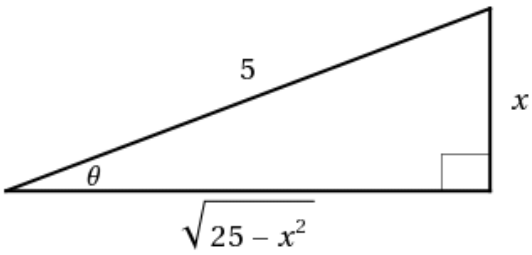
$$\int \frac{x^3}{\sqrt{x^2 + 25}}\,dx, \qquad x = 5\tan\theta$$

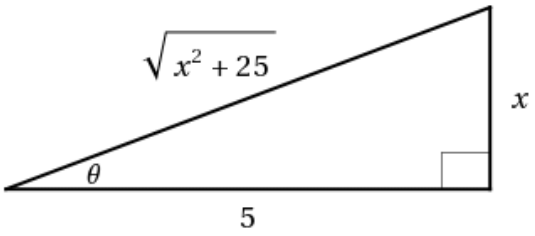
✔ $+ C$

Sketch and label the associated right triangle.









✔

Need Help? Read It Watch It Chat About It

2. 3.33/3.33 points | Previous Answers SCalcET7 7.3.004.

Evaluate the integral.

$$4\int_0^1 x^3\sqrt{1 - x^2}\,dx$$

✔

Need Help? Read It Chat About It

3. 3.33/3.33 points | Previous Answers SCalcET7 7.3.005.MI.

Evaluate the integral.

$$\int_{3\sqrt{2}}^{6} \frac{1}{t^3\sqrt{t^2-9}}\,dt$$

Need Help? Read It | Watch It | Master It | Chat About It

---

4. 3.33/3.33 points | Previous Answers SCalcET7 7.3.007.

Evaluate the integral.

$$7\int_0^a \frac{dx}{(a^2+x^2)^{3/2}}, \quad a > 0$$

Need Help? Read It | Chat About It

---

5. 3.33/3.33 points | Previous Answers SCalcET7 7.3.015.

Evaluate the integral.

$$\int_0^a 3x^2\sqrt{a^2-x^2}\,dx$$

Need Help? Read It | Watch It | Chat About It

---

6. 3.35/3.35 points | Previous Answers SCalcET7 7.3.022.

Evaluate the integral.

$$\int_0^9 \sqrt{x^2+81}\,dx$$

Need Help? Read It | Chat About It