Quiz - Sections 7.2 & 7.3

1. Section 7.2, 17

$$\int \cos^2 x \tan^3 x \, dx = \ln|\cos x| + \frac{1}{2}\cos^2 x + C$$

2. Section 7.2, 27

$$\int \tan^3 x \sec^4 x \, dx = \frac{1}{4}\tan^4 x + C$$

3. Section 7.2, 43

$$\int \sin 8x \cos 5x \, dx = \int \frac{1}{2}\sin 3x + \frac{1}{2}\sin 13x \, dx$$

$$= -\frac{1}{6}\cos 3x - \frac{1}{26}\cos 13x + C$$

4. Section 7.3, 7

$$\int \frac{1}{x^2\sqrt{25-x^2}} \, dx = -\frac{1}{25}\cot\theta + C = -\frac{\sqrt{25-x^2}}{25x} + C$$

5. Section 7.3, 17

$$\int \frac{x}{\sqrt{x^2-7}} \, dx = \sqrt{x^2-7} + C$$

6. Section 7.3, 27

$$\int \sqrt{x^2+2x} \, dx = \frac{1}{2}(x+1)\sqrt{x^2+2x} - \frac{1}{2}\ln|x+1+\sqrt{x^2+1}| + C$$