

MA 162 EXAM II - REVIEW EVEN ANSWERS

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$$\boxed{7.1} \quad (24) \quad \frac{1}{2} x^2 \tan^{-1} x - \frac{1}{2} x + \frac{1}{2} \tan^{-1} x + C$$

$$\boxed{7.2} \quad (6) \quad -\frac{1}{m} \left(\cos mx - \frac{1}{3} \cos^3 mx \right) + C$$

$$(14) \quad \pi/16 \quad (26) \quad 8/15$$

$$\boxed{7.4} \quad (10) \quad \frac{A}{x-2} + \frac{B}{(x-2)^2} + \frac{C}{(x-2)^3} + \frac{Dx+E}{x^2+1} + \frac{Fx+G}{2x^2+5x+7} + \frac{Hx+I}{(2x^2+5x+7)^2}$$

$$\boxed{7.5} \quad (2) \quad \ln |\csc x - \cot x| + \ln |\sin x| + C$$

$$(20) \quad \frac{1}{2} x^2 \sin^{-1} x - \frac{1}{4} \sin^{-1} x + \frac{1}{8} x \sqrt{1-x^2} + C$$

$$\boxed{7.7} \quad (32) \quad \sim 84 \text{ m}^2$$

$$\boxed{7.8} \quad (10) \quad \text{diverges}$$

$$\boxed{8.1} \quad (10) \quad 12$$

$$\boxed{8.2} \quad (10) \quad \frac{\sqrt{3} \pi}{2} + \frac{\pi}{4} \ln(\sqrt{3}+2)$$

$$\boxed{11.1} \quad (4) \quad 1, \frac{3}{5}, \frac{4}{8}, \frac{5}{11}, \frac{6}{14}$$

$$\boxed{11.2} \quad (20) \quad 20$$

$$\boxed{11.3} \quad (6) \quad \text{converges}$$

$$(12) \quad \text{converges}$$

$$\boxed{11.4} \quad (8) \quad \text{diverges}$$

Chap 7 Review

$$(2) \frac{1}{3} x \sin 3x + \frac{1}{9} \cos 3x + C$$

$$(4) -\ln |1 - \tan \theta| + C$$

Chap 8 Review

$$(4a) \frac{\pi}{6} (5^{3/2} - 1)$$

$$(4b) \frac{9\pi}{16} \sqrt{5} - \frac{\pi}{32} \ln(2 + \sqrt{5})$$

Chap 11 Review

(12) diverges

(18) converges