

**MATH 21300 Suggested Textbook Homework  
Problems (from Thomas' Calculus: Early  
Transcendentals, 15<sup>th</sup> ed., Hass, Heil, and  
Weir, Pearson)**

(problems in boldface are programmed in MML)

**12.2:** 1, **5**, 6, 7, **9**, 10, **11**, 13, **17**, 18, **19**, 20, 21, **23**, 25, **27**, 28, **29**, **31**, 33, **35**, **41**, 43.

**12.3:** 1, 2, **3**, 4, 5, 8, **9**, 11, 12, **13**, **16**, 17, 18, **35**, **37**, 38, 39, **41**, 42.

**12.4:** 2, **3**, 4, 7, **15**, 16, 17, **18**, **23**, 35, 36, **37**, 38, **39**, 40, **41**, **43**, 48.

**12.5:** 1, 3, 4, 5, 6, 7, 8, 9, 10, **13**, 15, **17**, **19**, 20, **21**, 22, **25**, **27**, 29, 30, 34, **35**, 36, **37**, 40, **41**, 44, **45**, **47**, 48, 51, **55**, 57, 58, **59**, 62, **63**, **65**, **71**, 73, 74.

**12.6:** 1, 3, 6, 7, 8, **9**, 10, 11, 12, 13, **14**, **18**, 19, 20, **21**, 23, 24, **25**, **27**, **29**, **31**, 32.

**14.1:** **3**, **5**, **6**, 7, 10, 12, **13**, 14, 15, 16, **17**, 18, 19, **23**, **26**, 29, 30, **31**, 32, **34**, **43**, **45**, 50, **51**, 61, 62, **63**, 77, 78.

**14.2:** 2, **3**, 5, 7, 8, 9, 10, 12, **14**, **15**, **17**, **21**, 23, **27**, 28, **29**, 32, **33**, 45, 46, 48, **49**, 50, 51, **65**, 66.

**14.3:** **2**, 3, 4, **5**, 6, **9**, 10, 14, **15**, 16, 18, **19**, 24, **25**, 27, **29**, 30, 35, 37, **38**, 43, **41**, **43**, 45, **47**, **51**, 54, **57**, 58, 59, 71, 75, **76**, 100\* (optional).

**14.4:** 1, **5**, **6**, 7, 8, 9, 10, **25**, **27**, 28, 29, 31, 33, 34, **35**, 36, **37**, 38, **41**, **45**, 51, 52.

**14.5:** 1, 3, **5**, 7, 9, **10**, 11, 13, **15**, **17**, 19, **21**, 23, **25**, **27**, 29, 31, **33**, 34, 35, 36, 40, 41, **43**.

**14.6:** 1, 3, **5**, 7, 9, **11**, 12, 13, 15, **17**, **19**, 21, **23**, 25, **27**, **29**, 31, **35**, **40**, **43**, 44, **45**, 49, **51**, 57, **58**, 59, 60.

**14.7:** 2, **3**, **5**, 7, **9**, 11, 12, **14**, **15**, **16**, **23**, **27**, 31, 33, **35**, **41**, **43**, 48, **49**, **51**, **55**, 59.

**15.1:** 1, 2, **5**, **6**, 7, **9**, 10, 11, **17**, 19, **21**, **22**, 23, 27, **29**, 30, **31**, 33, **34**, **38**.

**15.2:** 2, 3, 7, **9**, 11, **13**, **15**, 18, 19, 21, 22, 25, 26, **27**, 29, 30, **31**, **34**, 37, **39**, **41**, 43, **46**, **51**, **59**, **65**, 69, 73, **75**.

**15.3:** 1, 3, **5**, 6, **9**, 10, 11, 12, **13**, **15**, 17, **19**, 20, **21**, **25**, 26.

**15.4:** 1, 5, 6, 7, **9**, 11, **12**, **13**, 14, 17, **19**, **20**, 22, **23**, 26, **27**, **29**, **31**, 32, **33**, **37**, 39, 41\* (optional).

**15.5:** 1, **3**, 4, 5, 7, 10, **11**, **13**, 15, 16, **17**, **21**, **23**, 24, **25**, 27, **29**, 31, 33, **35**, **37**, **39**, **43**, 47.

**15.6:** 1, 4, **5**, 7, **11**, **13**, 15, **17**, **19**, 23, **25**, **27**, **29**, 31, **33**, 35\* (optional).

**15.7:** 1, 2, 3, 4, 6, 7, **9**, 13, 14, 15, 16, 17, 18, 19, **21**, **23**, **26**, 27, **29**, **31**, 33, 38, **39**, **41**, **43**, **45**,

47, **51, 55, 63, 65, 71, 77, 83, 87.**

**11.1: 1, 5, 7, 8, 10, 12, 14, 16, 19, 22, 24, 25, 29, 31, 32, 33, 34, 37, 38, 43, 50.**

**13.1: 1, 5, 7, 9, 11, 12, 13, 15, 17, 20, 21, 22, 23, 24, 25, 26, 29, 30, 31, 33, 34, 38, 43.**

**13.3: 1, 3, 5, 6, 7, 8, 9, 11, 13, 14, 18.**

**16.1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 19, 21, 25, 27, 29, 31, 33, 35, 37, 39.**

**16.2: 1, 2, 3, 5, 9, 11, 13, 15, 17, 19, 21, 23, 24, 25, 26, 27, 29, 31, 32, 33, 35, 39, 45, 47, 49, 55, 57, 59.**

**16.3: 1, 2, 3, 5, 7, 8, 9, 11\*** (start with z component), 13, **15, 16, 17, 19, 21, 25, 27, 29, 31.**

**16.4: 1, 3, 5, 9, 11, 13, 15, 17, 19, 21, 24, 25, 26, 27, 29, 31, 33, 34, 44\*** (optional).