
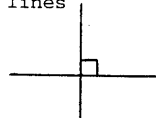
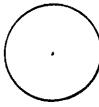


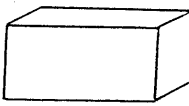
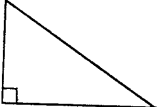


## ANSWERS: CHAPTER ONE

### ASSIGNMENT 1

10 Exercises	
# wrong	points
0-1	5 } Correct
2-3	4 } any errors
4-10	See an instructor

◊ 1-1 EXERCISES ◊ (all numbers, page 14)

- |  |   |   |  |
|--|---|---|--|
| 1. Obtuse angle<br> | 2. Perpendicular lines<br> | 3. Circle<br>         | 4. Cylinder<br> |
| 5. Trapezoid<br>    | 6. Rectangular solid<br>   | 7. Right triangle<br> |  |
| 8. 38°   | 9. 64°  | 10. 60°   |  |

◊ 1-2 EXERCISES ◊ (all numbers, page 22)

(Units of measurement must be included.)

- |                          |              |            |            |
|--------------------------|--------------|------------|------------|
| 1. 78 cm                 | 2. 18.85' ft | 3. 29.9 ft | 4. 36 cm   |
| 5. 50 cm                 | 6. 146.27'   | 7. 27.23'  | 8. 87.7 cm |
| 9. 3.628' m or 362.8' cm |              | 10. 95 ft  |            |

◊ 1-3 EXERCISES ◊ (all numbers, page 37)

(Units of measurement must be included.)

- |                          |                          |                           |                            |
|--------------------------|--------------------------|---------------------------|----------------------------|
| 1. 30 yd <sup>2</sup>    | 2. 4.896 in <sup>2</sup> | 3. 8.374' ft <sup>2</sup> | 4. 35.26' cm <sup>2</sup>  |
| 5. 3421' mm <sup>2</sup> | 6. 36.52 ft <sup>2</sup> | 7. 337.25 in <sup>2</sup> | 8. 212.06' mm <sup>2</sup> |
| 9. 35.64 ft <sup>2</sup> | 10. 29.76 m <sup>2</sup> |                           |                            |

### ASSIGNMENT 2

10 Exercises	
# wrong	points
0-1	5 } Correct
2-3	4 } any errors
4-10	See an instructor

◊ 1-4 SELF-TEST ◊ (all numbers, page 57)

(Units of measurement must be included.)

- |                             |                            |
|-----------------------------|----------------------------|
| 1. 52.36' cm <sup>3</sup>   | 2. 28.27' ft <sup>3</sup>  |
| 3. 2448 cm <sup>3</sup>     | 4. 12.3' ft <sup>3</sup>   |
| 5. 69.6' in <sup>3</sup>    | 6. 487.47' cm <sup>3</sup> |
| 7. 8181.23' cm <sup>3</sup> | 8. 11.96' ft <sup>3</sup>  |
| 9. 0.99' lb                 | 10. 9.97' cm <sup>3</sup>  |

(\*marks approximate values.)

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**ASSIGNMENT 3**

4 Exercises  
(8 answers)  
# wrong points  
0-1 5 } Correct  
2 4 } any errors  
3-8 See an instructor

◇ 1-5 SELF-TEST ◇ (all numbers, page 74)

1.  $\angle ZWY = \angle XWS = \angle WSQ = \angle PSR = 76^\circ$        $\angle XWZ = \angle YWS = \angle WSP = \angle QSR = 104^\circ$
2.  $\angle DAC = 75^\circ$        $\angle CDA = 90^\circ$        $\angle ACD = 15^\circ$       Arc AD =  $30^\circ$
3. 3.005' ft each
4.  $4.4 \text{ cm}^2$

---

**ASSIGNMENT 4**

10 Exercises  
# wrong points  
0-1 5 } Correct  
2-3 4 } any errors  
4-10 See an instructor

◇ 1-6 SELF-TEST ◇ (all numbers, page 82)

1.  $C = \sqrt{\frac{A}{0.0796}}$
2.  $t = \frac{360S}{\pi r^2}$
3.  $h = \frac{3V}{\pi r^2}$
4.  $l = \frac{V}{wh}$
5.  $B = \frac{3V}{H}$
6.  $d_1 = \frac{A}{0.7854d_2}$
7.  $h = \frac{2A}{b}$
8.  $h = \frac{2A}{b_1 + b_2}$
9.  $s = \frac{T_2(t + 5)}{T_1} - 6$
10.  $D = \frac{2E}{A}$

(\*marks approximate values.)

ANSWERS: CHAPTER TWO

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**ASSIGNMENT 5**

10 Exercises

# wrong	points	
0-1	5	} Correct any errors
2-3	4	
4-10		See an instructor

◇ 2-1 SELF-TEST ◇ (all numbers, pages 93-94)

1.  $l = 202.5$  in or  $16.875$  ft
  2.  $V_2 = 64.4^*$  m<sup>3</sup>
  3.  $d = 5$  ft  $2.83^*$  in
  4.  $C = 39^\circ$
  5.  $F = 60$  lb
  6.  $l = 58.82^*$  ft or  $58$  ft  $9.9^*$  in
  7.  $V = 2.38^*$  ft/min
  8.  $F = 194^\circ$
  9.  $V_2 = 60$  ft<sup>3</sup>
  10.  $h = 7.2$  ft
- 

**ASSIGNMENT 6**

5 Exercises

# wrong	points	
0	5	} Correct any errors
1	4	
2-5		See an instructor

◇ 2-2 SELF-TEST ◇ (all numbers, page 110)

1.  $l = 75.6$  ft
2.  $d = 0.092^*$  ft or  $1.1^*$  in
3.  $V = 190.5^*$  gal
4.  $l = 32.9^*$  cm
5.  $d = 1.22^*$  m or  $122^*$  cm

(\*marks approximate values.)

## ASSIGNMENT 7

10 Exercises

# wrong	points
0-1	5 } Correct
2-3	4 } any errors
4-10	See an instructor

◊ 2-3 SELF-TEST ◊ (all numbers, page 123)

- No
- Yes
- 13.04' m
- 3.68' in
- 1.732' ft
- 6.79' ft or 6 ft 9.5' in
- 106.21' mm or 10.62' cm
- 0.718' in
- 22.63' cm
- 23.1' in

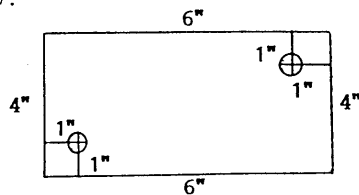
## ASSIGNMENT 8

10 Exercises

# wrong	points
0-1	5 } Correct
2-3	4 } any errors
4-10	See an instructor

◊ 2-4 SELF-TEST ◊ (all numbers, page 140)

- Yes
- Yes
- Yes
- $\angle B = \angle C = \angle D = \angle F = 65^\circ$        $DF = 0.97' m$        $EF = 1.8 m$
- $GI = 4.87' ft$        $LK = 7.95' ft$
- $\angle O = 32^\circ$        $\angle P = 58^\circ$        $\angle Q = 32^\circ$   
 $ON = 12.63' cm$        $PR = 5.46' cm$
- $\angle U = 50^\circ$        $\angle X = 99^\circ$        $\angle Y = 31^\circ$   
 $XZ = 3.56' ft$  (3 ft 6.67' in)       $UT = 17.58' ft$  (17 ft 6.94' in)
- 16.33' cm
- 15 km
- .



(\*marks approximate values.)

ANSWERS: CHAPTER THREE

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**ASSIGNMENT 9**

15 Exercises

# wrong	points
0-2	5   Correct
3-4	4   any errors
5-15	See an instructor

◊ 3-1 EXERCISES ◊ (even numbers, pages 150-151)

- 2.  $53^{\circ}15'0''$
- 4.  $136^{\circ}53'$
- 6.  $19.34^{\circ}$
- 8.  $92.7^{\circ}$
- 10.  $94.7^{\circ}$
- 12.  $78^{\circ}26'$
- 14.  $52.9^{\circ}$
- 16.  $68.2^{\circ}$
- 18.  $14.67^*$  mm
- 20.  $6.462^*$  m
- 22. 9.9 m
- 24. 7.5 m
- 26. Y
- 28. x
- 30. Y

---

**ASSIGNMENT 10**

20 Exercises

# wrong	points
0-3	5   Correct
4-6	4   any errors
7-20	See an instructor

◊ 3-2 EXERCISES ◊ (even numbers, pages 161-162)

- |                   |                   |
|-------------------|-------------------|
| 2. $\frac{k}{j}$  | 4. $\frac{k}{m}$  |
| 6. $\frac{l}{m}$  | 8. $\frac{o}{p}$  |
| 10. $\frac{o}{p}$ | 12. $\frac{o}{n}$ |
| 14. 2.400         | 16. 0.9231        |
| 18. 0.3846        | 20. 0.7971        |
| 22. 1.320         | 24. 0.7971        |
| 26. 0.9290        | 28. 0.3716        |
| 30. 2.500         | 32. 0.6599        |
| 34. 1.134         | 36. 0.7483        |
| 38. 0.7576        | 40. 0.6525        |

(\*marks approximate values.)

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**ASSIGNMENT 11**

20 Exercises  
# wrong    points  
0-3        5 } Correct  
4-6        4 } any errors  
7-20       See an instructor

◊ 3-3 EXERCISES ◊ (even numbers, pages 173-174)

- |                  |                  |
|------------------|------------------|
| 2. 0.9816        | 4. 9.514         |
| 6. 0.7314        | 8. 0.2756        |
| 10. 0.9986       | 12. $4^\circ$    |
| 14. $9^\circ$    | 16. $62^\circ$   |
| 18. $85^\circ$   | 20. $70^\circ$   |
| 22. 0.7408       | 24. 1.368        |
| 26. 0.04013      | 28. 0.8878       |
| 30. 0.9938       | 32. $38.2^\circ$ |
| 34. $4.3^\circ$  | 36. $86.4^\circ$ |
| 38. $22.7^\circ$ | 40. $25.4^\circ$ |
- 

**ASSIGNMENT 12**

20 Exercises  
# wrong    points  
0-3        5 } Correct  
4-6        4 } any errors  
7-20       See an instructor

◊ 3-4 EXERCISES ◊ (even numbers, pages 185-186)

- |  |                  |
|--|------------------|
| 2. $\angle$ -sum   | 4. sin           |
| 6. tan   | 8. tan           |
| 10. sin  | 12. Pyth         |
| 14. $\angle$ -sum  | 16. cos          |
| 18. 13.5 ft  | 20. 1370 yd      |
| 22. $26.8^\circ$   | 24. $90^\circ$   |
| 26. 3.32 cm  | 28. 18.9 in      |
| 30. 13.7 mm  | 32. $55.7^\circ$ |
| 34. $34.3^\circ$   |                  |
| 36. $\angle A = 67.4^\circ$ , $\angle B = 22.6^\circ$ , $c = 7.07$ m |                  |
| 38. $\angle B = 53.5^\circ$ , $a = 5.73$ mi, $b = 7.74$ mi           |                  |
| 40. $\angle A = 70.9^\circ$ , $a = 16.6$ in, $c = 17.6$ in           |                  |

(\*marks approximate values.)

ANSWERS: CHAPTER FOUR

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**ASSIGNMENT 13**

15 Exercises

# wrong	points	
0-2	5	} Correct
3-4	4	
5-15		See an instructor

◇ 4-1 EXERCISES ◇ (even numbers, pages 194-196)

- 2. 21.61 m
- 4. 15.47 ft or 15 ft 5.6 in
- 6. 22.12 ft or 22 ft 1.4 in
- 8.  $5.5^\circ$
- 10. 95.26 m
- 12. 90.04 m
- 14.  $8.2^\circ$
- 16. 4.661 in
- 18.  $84.3^\circ$
- 20. 2.472 in
- 22.  $20.5^\circ$
- 24. 9.781 m
- 26.  $12.7^\circ$
- 28.  $11.9^\circ$
- 30. 716.3 m

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**ASSIGNMENT 14**

15 Exercises

# wrong	points	
0-2	5	} Correct
3-4	4	
5-15		See an instructor

◇ 4-2 EXERCISES ◇ (even numbers, pages 207-210)

- 2. 13.71 cm
- 4.  $54.6^\circ$
- 6. 5.823 m
- 8. 9.334 cm
- 10. 52.50 m
- 12.  $13.0^\circ$
- 14. 108.4 ft
- 16. 114.4 ft
- 18. 4.502 m
- 20.  $16.6^\circ$
- 22. 69.17 ft
- 24. 52.53 cm
- 26. 3.119 ft
- 28. 15.10 m,  $59.7^\circ$
- 30. 100.1 ft

ANSWERS: CHAPTER FIVE

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**ASSIGNMENT 15**

20 Exercises

# wrong	points	
0-3	5	} Correct } any errors
4-6	4	
7-20		

◇ 5-1 EXERCISES ◇ (all numbers, page 218)

- |             |                             |
|-------------|-----------------------------|
| 1. -0.12533 | 2. -0.85710                 |
| 3. 0.24531  | 4. -0.88539                 |
| 5. 0.87882  | 6. -0.36199                 |
| 7. 0.61978  | 8. -0.56784                 |
| 9. -4.0408  | 10. -0.99939                |
| 11. 103.9°  | 12. 55.4° <u>and</u> 124.6° |
| 13. 171.7°  | 14. 19.9° <u>and</u> 160.1° |
| 15. 118.0°  | 16. 112.3°                  |
| 17. 165.8°  | 18. 30.6° <u>and</u> 149.4° |
| 19. 97.2°   | 20. 43.5° <u>and</u> 136.5° |

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**ASSIGNMENT 16**

32 Exercises

# wrong	points	
0-4	5	} Correct } any errors
5-9	4	
10-32		

◇ 5-2 EXERCISES ◇ (all numbers, pages 231-232)

- |                             |                             |
|-----------------------------|-----------------------------|
| 1. law of sines             | 2. cos                      |
| 3. Pyth                     | 4. law of sines             |
| 5. law of sines             | 6. 45.8°                    |
| 7. 56.3°                    | 8. 15.0 mm                  |
| 9. 3.68 mi                  | 10. 5.48 mi                 |
| 11. 30.2 cm                 | 12. 20.3 in                 |
| 13. 16.2 ft                 | 14. 11.0 m                  |
| 15. 12.3 km                 | 16. 17.6 yd                 |
| 17. 37.9 cm                 | 18. 27.5° <u>and</u> 152.5° |
| 19. 13.6°                   | 20. 10.2°                   |
| 21. 61.8°                   | 22. 1.8°                    |
| 23. 33.4°                   | 24. 27.3°                   |
| 25. 49.5° <u>and</u> 130.5° | 26. 19.6 mi                 |
| 27. 26.4 mi                 | 28. 59.0°                   |
| 29. 319.3 m                 | 30. 117.8 m                 |
| 31. 103.3 m                 | 32. 85.5 kg                 |

## ASSIGNMENT 17

26 Exercises

# wrong	points	
0-4	5	} Correct any errors
5-7	4	
8-26		See an instructor

◇ 5-3 EXERCISES ◇ (all numbers, pages 246-247)

1. law of sines
2. law of cosines
3. cos
4. Pyth
5. law of cosines
6. law of sines
7.  $70.7^\circ$  (or  $109.3^\circ$ )
8.  $31.8^\circ$
9.  $25.0^\circ$
10. 135 ft
11. 19.7 in
12. 27.8 ft
13.  $54.1^\circ$
14. 5.6 in
15.  $67.4^\circ$
16. 6.90 ft,  $115.8^\circ$
17. 13.0 mi
18.  $90.0^\circ$
19.  $52.7^\circ$
20. 96.7 ft
21. 1.9 m
22. 25.1 in,  $33.0^\circ$
23. 701 ft
24.  $53.1^\circ$
25.  $17.7^\circ$
26. 149.1 lb