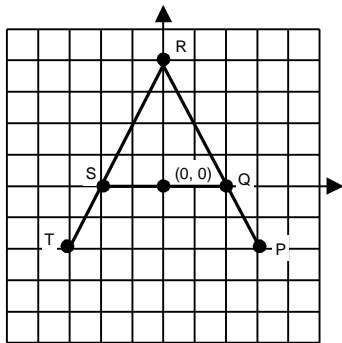


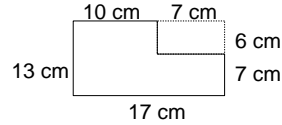
Answer Key

1. 70
2. 27
3. 24
4. -270
5. -56
6. 11
7. -11
8. -30
9. -75
10. 35
11. 1024
12. 1764
13. 2704
14. 3844
15. 324
16. 784
17. 1444
18. 2304
19. 3364
20. 529



- 21.
22. The area of $\triangle QRS = \text{base} \times \text{height} / 2 = 4 \times 4 / 2 = 8$.
23. The area of $\triangle PRT = \text{base} \times \text{height} / 2 = 6 \times 6 / 2 = 18$.
24. The area of trapezoid $PQST = (\text{top} + \text{bottom}) \times \text{height} / 2 = 10$.
25. $(\text{base} + \text{top}) \times \text{height} \div 2 = (8 + 12) \times 20 \div 2 = 200$
26. $P = (7, 5)$
27. $Q = (7, -1)$
28. $R = (-1, -1)$
29. $S = (-1, 5)$

30. A: $13 \times 17 = 221$, $6 \times 7 = 42$, $221 - 42 = 179 \text{ (cm}^2\text{)}$
P: $2 \times (13 + 17) = 60 \text{ (cm)}$.



31. $25 - (25 / 5 \times 2) = 15$
32. $25 \times (1 - 80\%) = 5$
33. $2\frac{1}{2} \times 2 = 5 \text{ inches}$
34. $40 / ((16 / 2) \times 1) = 5$
35. $84 / 7 \times 2 = 24$
36. $2 \times 12 \times (1 - 3/8) = 15$
37. $44 - 12 \times (3 + 1/2) = 2$
38. $24 \times (1 - 1/6) = 20$
39. $75 / (1 - 3/8) = 120$
40. $13 / (3 - 2) \times 2 = 26$
41. $1/2$
42. $1/9$
43. $1/10$
44. $1/2$
45. $1/2$
46. $1/4$
47. $1/2$
48. $1/3$
49. $1/64$
50. $16/25$
51. 2 in (A) & 7 in (B) & 5 in (C) & 8 in (D)
52. 4 in (A) & 9 in (B) & 3 in (C) & 5 in (D)
53. 8 in (A) & 7 in (B) & 8 in (C) & 5 in (D)
54. 8 in (A) & 7 in (B) & 4 in (C) & 8 in (D)
55. 4 in (A) & 8 in (B) & 3 in (C) & 10 in (D)
56. $\frac{1}{10} = 1/10$
57. -9
58. 1.1
59. .064
60. .002
61. 10,000
62. 250%
63. $30\% \times 24 = 7.2 = 7 \text{ hr} \& 12 \text{ min}$
64. 35%
65. 16

MAP 265 (T2) Issue 7

66. 4.5
67. $5 \times \frac{17}{60} - \frac{1}{6} = \frac{15}{12} = 1\frac{1}{4} = 1\frac{1}{4}$
68. $156 = 26 \times 6$
 $130 = 26 \times 5$
LCM = $26 \times 6 \times 5 = 780$
69. $6\frac{19}{48} = 6\frac{19}{48}$
70. $40 \div 8 = 5$
 $3 \times 5 \times 5 = 75 \text{ in}^2$
71. $9 \times 3 = 27$ (sum)
 $27 - 5 - 11 = 11$ (Charles)
72. $11^2\pi - 10^2\pi = 21\pi = 21 \text{ pi}$
73. 60°
74. $300 \div 20 = 15$
75. $18 \div 60 = 0.3$ (hr)
 $80 \times 0.3 = 24 \text{ mi}$
76. $x^2 + 4x - 45$
77. $x^2 - 7x + 10$
78. $x^2 - 6x + 5$
79. $x^2 - 4x - 5$
80. $x^2 + 3x - 40$
81. $x^2 - 3x - 10$
82. $x^2 - 9x + 20$
83. $2x^2 - 15x + 27$
84. $4x^2 - 9$
85. $18x^2 + 45x - 8$

Answer Key

- | | |
|---|---------------------------|
| 1. 22 | 42. 2 |
| 2. -15 | 43. 0.8 |
| 3. 24 | 44. 8 |
| 4. -108 | 45. 0.4 |
| 5. 2 | 46. 0.08 |
| 6. 1 | 47. 0.04 |
| 7. -56 | 48. 0.02 |
| 8. 7 | 49. 0.25 |
| 9. -70 | 50. 0.0625 |
| 10. 40 | 51. $x = -4$ |
| 11. 12.25 sq inches | 52. $x = 1$ |
| 12. 60 feet | 53. $x = -5$ |
| 13. 120 yards | 54. $x = 4$ |
| 14. 44 inches | 55. $x = 3$ |
| 15. 961 sq meters | 56. $x = -8$ |
| 16. 100 cm | 57. $x = 1$ |
| 17. 3721 sq inches | 58. $x = -1$ |
| 18. 60 yards | 59. $x = -3$ |
| 19. 62 meters | 60. $x = 4$ |
| 20. 46 cm | 61. $1/16$ |
| 21. $9.00 \times 4.5 \times 3 \times 2 = 243$ | 62. 2 |
| 22. $20 \times (1 - 55\%) = 9$ | 63. 5 |
| 23. $(36 \times 3 + 36/9 \times 4)/4 = 31$ | 64. $1/5$ |
| 24. $16 / ((16/4) \times 1) = 4$ | 65. $16/625$ |
| 25. $80/5 \times 1 = 16$ | 66. 20 |
| 26. $2 \times 12 \times (1 - 1/3) = 16$ | 67. $4/5$ |
| 27. $34 - 12 \times (2 + 2/3) = 2$ | 68. -2 |
| 28. $12 \times (1 - 2/3) = 4$ | 69. 10000 |
| 29. $80 / (1 - 1/6) = 96$ | 70. 4 |
| 30. $5280 \times (1 - 3/8) = 3300$ | 71. 0.0004 |
| 31. 0.5 | 72. 36 |
| 32. 0.25 | 73. 110 |
| 33. 0.2 | 74. .098 |
| 34. 0.125 | 75. 0.089 |
| 35. 0.1 | 76. $\frac{14}{3} = 14/3$ |
| 36. 10 | 77. $2^9 = 8^3$ |
| 37. 5 | 78. -4 |
| 38. 5 | 79. $x = 9$ |
| 39. 4 | 80. $\frac{7}{10} = 7/10$ |
| 40. 4 | |
| 41. 2 | |

MAP 265 (T2) Issue 8

$$81. \frac{\begin{array}{r} 30\frac{1}{15} \\ + 10\frac{5}{15} \\ + 20\frac{9}{15} \\ \hline 60\frac{15}{15}=61 \end{array}}{60\frac{15}{15}=61} = 61$$

82. x^{12}
 $\square = 12$

83. $54 \times 2 = 108$
 $54 \times \frac{1}{9} = 6$
 $108 + 6 = 114$

84. $6 \times 5 \div 2 = 15$ chords

85. $60 \times 5\% = 60 \times 0.05 = 3$
 $60 + 3 = \$63.00$

86. $\frac{1}{2} \times 6 \times 8 = 24$

87. $\Delta ABC = 30 = \frac{1}{2} \times BH \times AC = \frac{1}{2} \times BH \times 13$

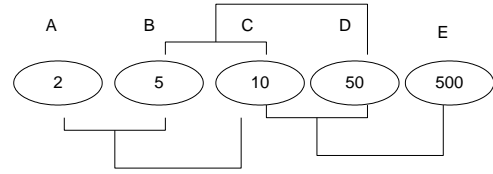
$BH = \frac{60}{13} = 60/13$

88. $63.75 \div 5 = \$12.75$

89. 19

90. 567 (cards)

See the following figure.

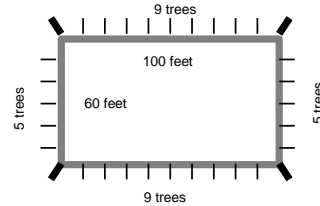


$2 + 5 + 10 + 50 + 500 = 567$

Answer Key

1. -53
2. -7
3. -8
4. 150
5. 14
6. -11
7. -2
8. -77
9. 10
10. 30
11. 0.04
12. 0.01
13. 100
14. 25
15. 25
16. 16
17. 16
18. 4
19. 0.64
20. 64
21. 0.16
22. 0.0064
23. 0.0016
24. 0.0004
25. -0.5
26. -0.25
27. -0.2
28. -0.125
29. -0.1
30. -10
31. 1089
32. $108,900 + 3,325 = 112,225$
33. 2809
34. 3969
35. 289
36. 729
37. 1369
38. 2209
39. 3249
40. 196
41. $91 = 7 \times 13$
 $2(7 + 13) = 40 \text{ cm}$

42. $400 - 100 = 300$
43. $100 \times 53.5 = 5350 \text{ yd}^2$.
44. On the sides, there are $9+5+9+5=28$ trees. On the corners, there are 4 trees. Therefore, the total is 32 trees.



45. $\angle A = 90^\circ$, $\angle B = 60^\circ$, hence $\angle C = 30^\circ$.
 $\angle B : \angle C = 2:1$
46. $120 \div 2 = 60$, $60 - 40 = 20$ (width)
47. $40 \div 4 = 10$
48. $40 + 10 = 50$ (new length)
 $20 + 10 = 30$ (new width)
49. $40 \times 20 = 800$ (old)
 $50 \times 30 = 1500$ (new)
the increase = $1500 - 800 = 700 \text{ sq. in.}$
50. $60 - 2 \times 15 = 30$ (length)
 $30 - 10 = 20$ (width)
 $30 \times 20 = 600 \text{ in}^2$ (area)
51. $50 - (50/5 \times 3) = 20$
52. $20 \times (1 - 85\%) = 3$
53. $3\frac{1}{2} \times 2 = 7$ inches
54. $48 / ((16/2) \times 1) = 6$
55. $40/8 \times 1 = 5$
56. $2 \times 12 \times (1 - 5/8) = 9$
57. $47 - 12 \times (3 + 1/3) = 7$
58. $24 \times (1 - 5/6) = 4$
59. $30 / (1 - 5/8) = 80$
60. $39 / (4 - 1) \times 1 = 13$
61. $5\frac{1}{2} = 5 \frac{1}{2}$
62. $3\frac{7}{12} = 3 \frac{7}{12}$
63. 1.2
64. 6.4
65. $2\frac{1}{4} \text{ lb} = 2\frac{1}{4} \times 16 \text{ oz} = 36 \text{ oz.}$
66. $105 \text{ min} = 1 \text{ hr and } 45 \text{ min} = 1\frac{3}{4} = 1 \frac{3}{4} \text{ hr}$
67. 240,000
68. 3120000
69. $x = 9$

MAP 265 (T2) Issue 9

70. $1\frac{1}{2} \times 2\frac{2}{3} = \frac{3}{2} \times \frac{8}{3} = 4$

71. $\frac{1}{96}$

72. 135%

73. 10

$79 \div 8 = 9R7$

74. $7.5 \div 3 = 2.5$

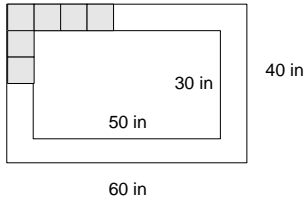
$2.5 \times 140 = 350$ miles

75. The sum is 36.

Dan is 24 and Anna is 12.

$D - A = 12$

76. $40 \times 60 - 1500 = 900 \text{ in}^2$

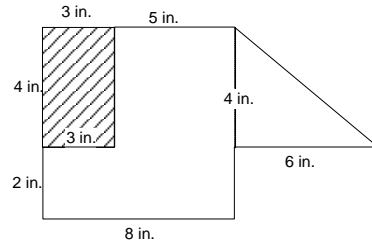


77. $1 - \frac{1}{3} - \frac{1}{2} \times \frac{2}{3} = \frac{1}{3}$ (unsold)

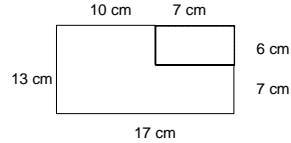
$1 - \frac{1}{3} = \frac{2}{3}$ (sold)

$50 \times 2 = 100$

78. $8 \times 6 - 3 \times 4 + \frac{1}{2}(4 \times 6) = 48 - 12 + 12 = 48$



79. $P = 2 \times (13 + 17) = 60$ (cm)



80. $1 + 20\% = 1.2$

$1.2 \times 12 = \$14.40$

81. $x^2 - 2x - 35$

82. $3x^2 - 10x - 8$

83. $6x^2 + 7x + 2$

84. $9x^2 - 9x + 2$

85. $18x^2 + 51x + 8$

86. 3 in (A) & 7 in (B) & 8 in (C) & 10 in (D)

87. 6 in (A) & 5 in (B) & 6 in (C) & 9 in (D)

88. 3 in (A) & 6 in (B) & 7 in (C) & 10 in (D)

89. 4 in (A) & 6 in (B) & 3 in (C) & 9 in (D)

90. 4 in (A) & 5 in (B) & 8 in (C) & 8 in (D)

Answer Key

1. 2
2. 10
3. 13
4. -3
5. -36
6. -65
7. -15
8. $\frac{1}{12}$
9. 4
10. 28
11. -5
12. -5
13. -4
14. -4
15. -2
16. -2
17. -0.8
18. -8
19. -0.4
20. -0.08
21. -0.04
22. -0.02
23. 0.25
24. 0.0625
25. 0.04
26. 0.01
27. 100
28. 25
29. 25
30. 16
31. 576
32. $57,600 + 2,916 = 60,516$
33. 1936
34. 2916
35. 256
36. 676
37. 1296
38. 2116
39. 3136
40. 256
41. $8.00 \times 7.5 \times 4 \times 3 = 720$
42. $20 \times (1 - 60\%) = 8$
43. $(36 \times 3 + 36/9 \times 5)/8 = 16$
44. $8 / ((16/8) \times 1) = 4$
45. $85/5 \times 4 = 68$
46. $1 \times 12 \times (1 - 2/3) = 4$
47. $35 - 12 \times (2 + 1/4) = 8$
48. $8 \times (1 - 1/4) = 6$
49. $12 / (1 - 5/6) = 72$
50. $5280 \times (1 - 5/8) = 1980$
51. $\frac{1}{625}$
52. $\frac{256}{625}$
53. 16
54. 625
55. 160000
56. $\frac{100}{81}$
57. $\frac{625}{16}$
58. 0.0001
59. $\frac{1}{256}$
60. 16
61. 6 in (A) & 10 in (B) & 7 in (C) & 5 in (D)
62. 5 in (A) & 10 in (B) & 4 in (C) & 7 in (D)
63. 2 in (A) & 6 in (B) & 2 in (C) & 6 in (D)
64. 3 in (A) & 7 in (B) & 4 in (C) & 8 in (D)
65. 2 in (A) & 8 in (B) & 5 in (C) & 8 in (D)
66. -0.008
67. 27
68. 120
69. .0125
70. 0.0144
71. 4
72. -42
73. -10
74. $x = \frac{20}{3} = 20/3$
75. 640
76. $\frac{\frac{21}{30} - \frac{5}{5}}{\frac{16}{30} - \frac{8}{15}} = 8/15$
77. 0.027
78. $5^8 = (5^2)^4 = 25^4$
 $\square = 4$
79. $400 \times 60\% = \$240.00$

MAP 265 (T2) Issue 10

80. $400 - 240 = \$160.00$

81. $2,000 \times 0.95 = 1,900$
 $1,900 \times 0.03 = \$57.00$

82. $60 \div 1.2 = 50$

83. $\frac{1}{2}(8 + 16) \times h = 12 \times h = x^2$
 $h = 3$
 $x = 6$
 $4 \times 6 = 24$

84. $3\frac{11}{12} = 3 \frac{11}{12}$

85. $(120 - 96) \div 120 = .2 = 20\%$

86. $x^2 - 7x - 8$

87. $3x^2 + 16x + 16$

88. $9x^2 - 9x - 10$

89. $6x^2 + 17x + 5$

90. $12x^2 + 19x + 4$

Answer Key

1. 32
2. -6
3. 6
4. 0
5. -2
6. -2
7. 8
8. 57
9. 184
10. -42
11. 16
12. 4
13. 4
14. 0.64
15. 64
16. 0.16
17. 0.0064
18. 0.0016
19. 0.0004
20. 0.008
21. 0.125
22. 8
23. 8
24. 125
25. 0.00032
26. 0.03125
27. 32
28. 32
29. 3125
30. 0.008
31. 1296
32. $129,600 + 2,896$
 $= 132,496$
33. 676
34. 2116
35. 3136
36. 4356
37. 4761
38. 4489
39. 4900
40. 5041
41. The perimeter of the parallelogram is
 $2 \times (15 + 20) = 70$
The area of the parallelogram is
(base \times height)
 $= 5 \times 20$
 $= 100 \text{ cm}^2$
42. Each side of Square A is $36 = 6 \times 6$, its perimeter is
 $4 \times 6 = 24$. The perimeter of Square B is $24 - 12 =$
 12 , each side is $12 \div 4 = 3$ in, the area is $3 \times 3 = 9$
 in^2 .
43. Each triangle has an area of $\frac{1}{2} \times 10 \times 10 = 50$. Note
that the height (altitude) is the same.
44. Area $= (6 + 14) \times 7.5 / 2 = 75 \text{ (m}^2\text{)}$
Perimeter $= 17 + 20 = 37 \text{ (m)}$
45. Consider the area:
total = trapezoid + triangle,
trapezoid $= \frac{1}{2} \times (6 + 19) \times 8 = 100$
triangle $= \frac{1}{2} \times 5 \times 12 = 30$
the total area $= 130 \text{ (cm}^2\text{)}$
Consider the perimeter:
the perimeter $= 9 + 6 + 13 + 5 + 19 = 52 \text{ (cm)}$
46. $\frac{1}{2} \times 10 \times 8 = 40 \text{ (cm}^2\text{)}$
47. $(10 \times 20) - (6 \times 16)$
 $= 200 - 96$
 $= 104$
48. $\frac{1}{2} \times \text{base} \times \text{height}$
 $= \frac{1}{2} (20 \times 10)$
 $= 100$
49. $\frac{1}{2} \times \text{base} \times \text{height}$
 $= \frac{1}{2} \times 20 \times 10$
 $= 100$
50. $\frac{1}{2} \times (\text{base} + \text{top}) \times \text{height}$
 $= \frac{1}{2} \times (8 + 12) \times 20$
 $= 200$
51. $24 - (24 / 3 \times 1) = 16$
52. $20 \times (1 - 90\%) = 2$
53. $4\frac{1}{2} \times 2 = 9$ inches
54. $18 / ((16 / 8) \times 3) = 3$
55. $152 / 8 \times 3 = 57$
56. $2 \times 12 \times (1 - 7/8) = 3$
57. $56 - 12 \times (4 + 2/3) = 0$
58. $35 \times (1 - 1/7) = 30$
59. $7 / (1 - 7/8) = 56$
60. $13 / (4 - 3) \times 3 = 39$

MAP 265 (T2) Issue 11

61. $(\frac{3}{2})^2 = \frac{9}{4} = 2.25$

62. 2

63. $\frac{1}{10} = 1/10$

64. 0.007

65. $\frac{60}{16} = \frac{15}{4} = 3\frac{3}{4} = 3\ 3/4$ (lb)

66. 24

67. 4

68. 2.25

69. $x = 4$

70. $2\frac{1}{2} - 1\frac{2}{3} = 2\frac{3}{6} - 1\frac{4}{6} = \frac{5}{6} = 5/6$

71. 24

72. 203%

73. 5

74. 6

75. $\frac{1}{2}(25)(10) = 125$ in²

76. $20 \times 14 - 16 \times 10 = 280 - 160 = 120$

77. $\frac{1}{2} \times (20 \times 10) = 100$

78. $20 \times \frac{1}{4} = 5$

$20 + 5 = 25$

79. (a) $32 \times \frac{3}{4} = 24$ (D)

b) $5 \times 24 = 120$ (J)

80. $65 \times 3 - 55 = 140$

$140 \div 2 = 70$ lb

81. $x^2 - 8x - 9$

82. $3x^2 - 17x + 20$

83. $6x^2 + 17x + 5$

84. $6x^2 - 17x + 12$

85. $6x^2 - 5x - 6$

Answer Key

- | | |
|------------------------------------|---|
| 1. 48 | 42. 625 |
| 2. 8 | 43. 1225 |
| 3. 30 | 44. 2025 |
| 4. 24 | 45. $72\frac{1}{4}$ |
| 5. 14 | 46. 125% |
| 6. -63 | 47. 6.25 |
| 7. 2 | 48. 22500 |
| 8. -2 | 49. 62500 |
| 9. 63 | 50. 0.0225 |
| 10. -6 | 51. $72 - (72/8 \times 5) = 27$ |
| 11. 5184 | 52. $40/8 \times 3.6 = 18$ |
| 12. $518,400 + 4,329$
= 522,729 | 53. $5\frac{1}{5} \times 5 = 26$ inches |
| 13. 5476 | 54. $30 \times \frac{1}{5} = 6$
$30 - 6 = 24$ (not ripe) |
| 14. 5625 | 55. $144 \times (1 - 3/8) = 90$ |
| 15. 5776 | 56. $42 \times (1 - 2/7) = 30$ |
| 16. 5929 | 57. $2 \times 5.50 + 4 \times 5.25 = 32$ |
| 17. 6084 | 58. $14 / (1 + 1/6) = 12$ |
| 18. 6241 | 59. $20 + (24 - 28) \times (6 - 3) = 8$ |
| 19. 6400 | 60. $52 \times (3/4) = 39$ |
| 20. 6561 | 61. -1 |
| 21. 0.125 | 62. 3 |
| 22. 8 | 63. 2 |
| 23. 125 | 64. 4 |
| 24. 0.00032 | 65. 4 |
| 25. 0.03125 | 66. 2 |
| 26. 32 | 67. -1 |
| 27. 32 | 68. 2 |
| 28. 3125 | 69. 1 |
| 29. 2 | 70. 3 |
| 30. 4 | 71. 3 |
| 31. 5 | 72. 1 |
| 32. 8 | 73. 2 |
| 33. 10 | 74. -1 |
| 34. 0.1 | 75. 3 |
| 35. 0.2 | 76. 2 |
| 36. 0.25 | 77. 3 |
| 37. 0.5 | 78. 3 |
| 38. 1.25 | 79. 3 |
| 39. 0.125 | 80. 3 |
| 40. 2.5 | 81. 24 |
| 41. 225 | 82. .6 |

MAP 265 (T2) Issue 12

83. $\frac{21}{10} = 2\frac{1}{10} = 2 \frac{1}{10}$

84. 0.7

85. $180 \div 12 = 15$
 $15 \div 3 = 5$ yd

86. 3

87. 560000

88. 9

89. 18

90. $\frac{2}{3} = 2/3$

91. 125

92. 0.024

93. 14.62

94. $6,000,000 \times 10\% = 6,000,000 \times 0.1 = \$600,000$

95. $1\frac{3}{4} \times 4 \times 3 = 21$ (hours)