

# Answer Key

1. 45
2. 51
3. 7
4. 7
5. -57
6. -8
7. 29
8. 6
9. -45
10. -15
11. 121
12. 144
13. 169
14. 441
15. 961
16.  $x^2 + 10x + 16$
17.  $x^2 + 11x + 18$
18.  $x^2 + 6x + 8$
19.  $3x^2 + 22x + 24$
20.  $x^2 + 9x + 14$
21. The perimeter of the trapezoid is  $10+10+15+9=44$  (cm).
22. The area of the trapezoid is  $\frac{1}{2} \times (\text{base} + \text{top}) \times \text{height} = \frac{1}{2} \times 25 \times 8 = 100$  cm<sup>2</sup>.
23.  $30 \times 2 \div 5 = 12$   
 $12 \times 20 = 240$  (rectangle area)  
 $240 + 30 = 270$  in<sup>2</sup> (trapezoid area)
24. 4 ft = 48 in  
 $48 \div 2 = 24$   
3 ft = 36 in  
 $36 \div 2 = 18$   
 $24 \times 18 = 432$  (pieces)
25.  $6 \times 8 = 48$  ft<sup>2</sup>
26. 6 feet = 72 inches  
8 feet = 96 inches  
So, it needs  $\frac{72}{3} \times \frac{96}{3} = 24 \times 32 = \boxed{768}$  pieces.
27.  $\frac{72}{5} \times \frac{96}{5} \rightarrow 15 \times 20 = 300, 300 \times 0.60 = \boxed{\$180}$
28. The perimeter of the bar base is  $(16+10) \times 2 = 52$   
To cover the bar with 4-ft high, we need cherry wood  
 $52 \times 4 = \boxed{208}$  sq ft
29. The wall area is (perimeter  $\times$  height)  
 $= (6+8) \times 2 \times 10$   
 $= 280$  sq. feet.  
 $280 \times 5 = \$1400$
30.  $25 \times 40 - 6 \times 8 - 16 \times 10$   
 $= 1000 - 48 - 160$   
 $= 792$  (sq. feet)  
 $792 \times 2 = \$1584$
31.  $8.25 \times 4 \times 2 \times 3 = 198$
32.  $20 \times (1 - 65\%) = 7$
33.  $(36 \times 2 + 36 \div 9 \times 7) \div 10 = 10$
34.  $12 \div ((16 \div 4) \times 1) = 3$
35.  $90 \div 6 \times 1 = 15$
36.  $2 \times 12 \times (1 - 1/4) = 18$
37.  $38 - 12 \times (2 + 3/4) = 5$
38.  $20 \times (1 - 3/4) = 5$
39.  $84 \div (1 - 1/7) = 98$
40.  $5280 \times (1 - 7/8) = 660$
41.  $18 \times (1/3) = 6$
42.  $60 \times 1 + 60 \div 3 \times 1 = 80$
43.  $12 \times (11/3) = 44$
44. 8
45.  $1/2$
46. 8
47. 9
48. 4
49.  $1/1024$
50. 2
51.  $1/2$
52.  $1/2$
53. 8
54. 3 in (A) & 10 in (B) & 3 in (C) & 4 in (D)
55. 7 in (A) & 6 in (B) & 8 in (C) & 10 in (D)
56.  $0.07^2 = 0.0049$
57. 54
58.  $\frac{7}{8} = 7/8$
59.  $1 \frac{35}{36}$
60. 12.5
61. 0.008
62.  $1.1 + 1.3 - 0.4 \times 0.3 = 2.28$
63.  $(2 \times 3) \times (3 \times 4) \times (4 \times 5) = 6 \times 12 \times 20$   
 $\square = 20$

# MAP 265 (T2) Issue 1

64. -7

65.  $x = -6$

66.  $(\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6})^2 = (\frac{1}{6})^2 = \frac{1}{36} = 1/36$

67. 9

68. 5

69. 16

70.  $2,000 \times 0.8 = 1,600$

$1,600 \times 0.05 = \$80.00$

71.  $60 \times 20\% = 60 \times 0.2 = 12$

$60 - 12 = \$48.00$

72. C

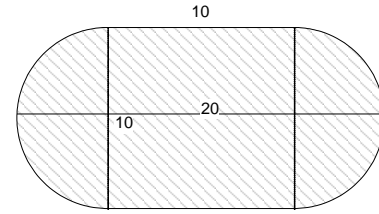
1 - 20% = 0.8

2<sup>nd</sup> time:  $0.8 \times 0.8 = 0.64$

3<sup>rd</sup> time:  $0.8 \times 0.64 = 0.512$

4<sup>th</sup> time:  $0.8 \times 0.512 = 0.4096$

73. 20 yd



74.  $420 \times .3 = \$126.00$

75.  $80 \times 80\% = 80 \times .8 = \$64.00$

# Answer Key

1.  $0.25=25\%=\frac{1}{4} = 1/4$
2.  $0.4=40\%=\frac{2}{5} = 2/5$
3.  $0.5=50\%=\frac{1}{2} = 1/2$
4.  $0.35=35\%=\frac{7}{20} = 7/20$
5.  $1.25=125\%=1\frac{1}{4} = 1 1/4$
6.  $2.36=236\%=2\frac{9}{25} = 2 9/25$
7.  $3.20=320\%=3\frac{1}{5} = 3 1/5$
8.  $4.25=425\%=4\frac{1}{4} = 4 1/4$
9.  $5.50=550\%=5\frac{1}{2} = 5 1/2$
10.  $10.75=1075\%=10\frac{3}{4} = 10 3/4$
11. -6
12. -6
13. -7
14. 6
15. 5
16. 900
17. 121
18. 8000
19. 64000
20.  $121/100$
21. -1
22. -1
23.  $9/4$
24.  $4/5$
25. 5
26.  $x^2 + 7x + 12$
27.  $x^2 + 13x + 36$
28.  $x^2 + 9x + 20$
29.  $x^2 + 7x + 12$
30.  $x^2 + 10x + 24$
31.  $x^2 + 11x + 28$
32.  $x^2 + 12x + 32$
33.  $x^2 + 12x + 35$
34.  $x^2 + 13x + 40$
35.  $3x^2 + 17x - 28$
36. 1225 sq meters
37. 30 sq meters
38. 80 meters
39. 6 feet
40. 196 sq feet
41. 576 sq inches
42. 120 meters
43. 60 meters
44. 8 sq inches
45. 11 sq yards
46.  $5.00 \times 8.5 \times 4 \times 3 = 510$
47.  $30 \times (1 - 40\%) = 18$
48.  $(36 \times 3 + 36 / 6 \times 5) / 6 = 23$
49.  $\frac{1}{8} \times 16 \times 14 = 28$  ounces
50.  $96 / 3 \times 2 = 64$
51.  $\frac{3}{4} \times 144 = 108$
52. 1.44
53. 0.2
54.  $\frac{24}{35} = 24/35$
55. .49
56.  $1 \frac{3}{7}$
57.  $\frac{8}{3} \times \frac{15}{4} = 10$
58. 2
59.  $\frac{1}{3}(n - \frac{2}{3}) = -2$   
 $n - \frac{2}{3} = -6$   
 $n = -5\frac{1}{3} = -5 1/3$
60.  $5(x + 3) = 30$   
 $x + 3 = 6$   
 $x = 3$
61.  $\frac{1}{4} = 1/4$
62.  $7 + 2 = 9$   
 $9 + 6 = 15$   
 $15 + 2 = 17$   
 $17 + 6 = 23$   
 $23 + 2 = 25$
63.  $5 - 3\frac{4}{5} = 1\frac{1}{5} = 1 1/5$
64.  $9^4 \times 3^3 = 3^{11}$   
 $\square = 11$
65.  $90^\circ$
66. C
67. I(3, -4.5)
68. 12
69. 2 in (A) & 6 in (B) & 7 in (C) & 5 in (D)
70. 3 in (A) & 8 in (B) & 2 in (C) & 4 in (D)

# Answer Key

1.  $x^2 + 5x - 6$
2.  $x^2 + 8x - 9$
3.  $x^2 + 7x - 8$
4.  $x^2 + x - 2$
5.  $x^2 + 3x - 4$
6. 961
7. 1681
8. 2601
9. 3721
10. 5041
11. 6
12. 63
13. 120
14. 165
15. 20
16. -4
17. 17
18. 0
19. -2
20. 6
21. P=(12, 0)
22. Q=(9, -9)
23. R=(-6, -9)
24. S=(-12, 0)
25. T=(0, 12)
26.  $\frac{1}{2}(12 \times 16) = \boxed{96 \text{ in}^2}$
27. 12 : 16 : \_\_\_  
= 3 : 4 : 5  
The length of the diagonal is  $\boxed{20 \text{ in}}$  by proportion.
28.  $96 \times 2 \div 20 = \boxed{9.6 \text{ in}}$
29.  $40 \div 5 = 8$   
 $8 \times 4 = 32$   
 $32 - 4 = 28$  (smaller squares)
30.  $40 - 2 \times 5 = 30$   
The uncovered square is 30 by 30.  
 $30 \times 30 = \boxed{900 \text{ in}^2}$
31.  $9.25 \times 5 \times 4 \times 2 = 370$
32.  $30 \times (1 - 70\%) = 9$
33.  $(36 \times 3 + 36/9 \times 8) / 20 = 7$
34.  $12 / ((16/8) \times 1) = 6$
35.  $114 / 6 \times 5 = 95$
36.  $1 \times 12 \times (1 - 3/4) = 3$
37.  $50 - 12 \times (3 + 1/6) = 12$
38.  $15 \times (1 - 1/5) = 12$
39.  $70 / (1 - 2/7) = 98$
40.  $15 / (2 - 1) \times 1 = 15$
41. 1/2
42. 1/2
43. 256
44. 1/2
45. 1/2
46. -0.027
47. 1
48.  $4/3 = 1 \frac{1}{3}$
49. .007
50. 0.00032
51. 25/36
52. 132
53.  $3.14 \times .03 = .0942$
54.  $2(x - 1) + 3(x + 1) = 6$   
 $5x + 1 = 6$   
 $x = 1$
55.  $(1 + \frac{1}{2})(1 + \frac{1}{3})(1 + \frac{1}{4})(1 + \frac{1}{5})(1 + \frac{1}{6}) = \frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \frac{6}{5} \times \frac{7}{6} = \frac{7}{2}$
56. 8
57. 0.0025
58. 12
59.  $7 \frac{7}{10} = 7 \frac{7}{10}$
60.  $80 \times 70\% = 80 \times 0.7 = \$56$
61.  $25^2 = \underline{20}^2 + 15^2$   
Ans = 20
62.  $\frac{1}{2}(12) = 6 \text{ in}$
63.  $20 \times 1.5 = 30$   
 $12 \times 30 = \$360$
64.  $22 \times 14 \times 12 / 231 = 16$   
Note  $231 = 11 \times 21$
65.  $273 \div 3 = 91$   
 $91 \div 7 = 13$   
 $273 = 3 \times 7 \times 13$   
Ans = { 3, 7, 13 }
66. -24
67.  $\frac{8}{9} = 8/9$
68.  $\frac{1}{10} = 1/10$
69. .009

## MAP 265 (T2) Issue 3

70.  $10 \text{ yd} = 30 \text{ ft} = 360 \text{ in}$
71. 20000
72.  $-20 \times 30 \times -40 \times \frac{1}{2} \times \frac{1}{3} \times \frac{1}{4}$   
 $= 20 \times 30 \times 40 \times \frac{1}{2} \times \frac{1}{3} \times \frac{1}{4}$   
 $= (20 \times \frac{1}{2}) \times (30 \times \frac{1}{3}) \times (40 \times \frac{1}{4})$   
 $= 1000$   
Note: Simplify before multiply.
73.  $20/3 = 6 \frac{2}{3}$
74. 6
75.  $\frac{3}{5} = 3/5$
76. 280
77. 321%
78.  $8^3 \times 3 - 7^2 - 10 = 1477$
79. 400
80.  $1.18 \times 5 = \$5.90$
81. Note that shaded area  
 $= \frac{1}{4}(\text{circle}) - \Delta$   
 $= \frac{1}{4} \times (400\pi) - \frac{1}{2}(400)$   
 $= 100\pi - 200 = 314 - 200 = 114$
82.  $(8+12) \times 20 \div 2 = 200$
83.  $90 \times 0.7 = \$63.00$
84.  $12 \div 2 = 6$   
 $12 \times 6 = 72 \text{ in}^2$
85.  $(3 \times 8/4) \times \frac{1}{3} = 2 \text{ (cups)}$
86. 3 in (A) & 9 in (B) & 6 in (C) & 5 in (D)
87. 6 in (A) & 8 in (B) & 3 in (C) & 8 in (D)
88. 7 in (A) & 10 in (B) & 7 in (C) & 6 in (D)
89. 3 in (A) & 10 in (B) & 3 in (C) & 8 in (D)
90. 7 in (A) & 5 in (B) & 8 in (C) & 7 in (D)