Answer Key

1. 10.85
2. 11
3. 12
4. 17.7
5. 11
6. 11.8
7. 5.5
8. 12.3
9. 11.86
10. 15.8
11. 4.36
12. 1.28
13. 1.89
14. 6.37
15. 3.38
16. 2.76
17. 0.78
18. 4.61
19. 3.05
20. 1.677

21. 21 1/4
22. 22 3/6
23. 19 3/8
24. 13 6/9
25. 13 3/6
26. 19 1/4
27. 22 1/6
28. 18 4/8
29. 12 1/9
30. 15 3/6
31. 61
32. 45
33. 21
34. 77
35. 43
36. 27
37. 51
38. 36
39. 63
40. 31

41. 30
42. 21
43. 30
44. 30
45. 18
46. 36
47. 8
48. 30
49. 28
50. 28
51. 6
52. 6
53. 7
54. 6
55. 4
56. 3
57. 3
58. 2
59. 5
60. 8

61. 600
62. 11.1
63. 256
64. 200
65. 18
66. 450
67. 132
68. 30
69. 64
70. 21
71. 20
72. 200
73. 7
74. 480
75. 64
76. 30
77. 25
78. 340
79. 4900
80. 248

81. 10
82. 67
83. 14 people
84. $2.25
85. 6 dolls
86. 15 gal
87. 3 gal
88. $5.00
89. 28
90. $500
91. 24 marbles
92. 100 min
93. 6 tables
94. $6
95. 3 (right) 7 (left)
96. (a) $33 (b) $15 (c) $60
97. 49 days
98. $6.00
99. 8 meters
100. (a) 1/4, 1/12, 7/12

101. 10 min = $\frac{1}{6}$ hr
$\frac{1}{6} \times 12 =$ 2 miles

102. A: 5
E: 2
L: 8
5 + 2 + 8 = 15

103. 2:15 PM

Drafted by www.MathEnglish.com

104. C
105. 5:10 – 0:25 = 4:45 PM
106. 4 + 1 + 2 = $7
107. 2 right angles
108. 3
109. C
110. 2(3+7) = 20
111. 7 + 9 + 8 + 7 = 31
112. 4 cuts
113. B
114. B
115. D
116. 13,400
117. A
118. 1620÷ 9 = 180
119. D
120. A

Answer Key

1. 420
2. 840
3. 1400
4. 660
5. 1300
6. 650
7. 1600
8. 1700
9. 1800
10. 900
11. 1200
12. 1800
13. 2100
14. 2400
15. 2700
16. 3300
17. 3600
18. 3900
19. 4200
20. 450

21. 1/30
22. 1/72
23. 11/28
24. 13/42
25. 2/9
26. 3/40
27. 4/9
28. 5/32
29. 7/18
30. 9/16
31. .04, .004
32. .05, .005
33. .06, .006
34. .07, .007
35. .08, .008
36. .09, .009
37. .001, .0001
38. .002, .0002
39. .003, .0003
40. .004, .0004

41. 3.5
42. 4.4
43. 5.9
44. 10.5
45. 5.4
46. 3.25
47. 6.75
48. 8.75
49. 5.125
50. 4.375
51. 0.008
52. 0.008
53. 0.064
54. 0.2
55. 2100
56. 54.321
57. 6
58. 24000
59. 500
60. 180

61. 200
62. 56%
63. 900
64. 200
65. 80
66. 70
67. 18
68. {12, 15, 20, 24, 30, 40, 60, 120}.
69. 7
70. A
71. 9 tickets
72. 30
73. 20 quarts
74. 2 hrs
75. 8 (pounds)
76. 5 (pounds)
77. $1920
78. $10
79. 10 (g) 16 (b)
80. 60 mph

81. 46 inches
82. 5 hrs
83. $3.10
84. 16 gallons
85. 16 races
86. 32 1/8 (pounds)
87. $61
88. 33 (points)
89. $30
90. 5 (M) 10 (J)
91. $2
92. $4
93. $22
94. $6
95. $7.50
96. $3.80
97. <u>12</u>
98. <u>$10</u>
99. <u>2100</u>
100. 1/6

Drafted by www.MathEnglish.com

MAP 249+ (T3) Issue 5

101. 1/4

102. N
$1\frac{1}{2} + \frac{1}{2} + 1\frac{3}{4} = 3\frac{3}{4}$ hr
6:00+3:45 = 9:45

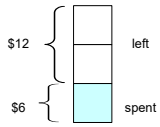
103. $\frac{5}{8} \times 12 = 7.5$ million

104. $12 \times \frac{1}{3} = 4$
$12 + 4 = \underline{\$16}$

105. $20 \times \frac{1}{4} = 5$
$20 - 5 = \$15$

106. 10 sec = $\frac{1}{3}$ of 30 sec.
$\frac{1}{3}(600{,}000) = \$200{,}000$

107. $6 \times 3 = \underline{18}$



108. $(4\frac{1}{4}+5+6\frac{5}{8}) - (5+2\frac{1}{3}+8\frac{1}{4})$
$= (\frac{1}{4}+\frac{5}{8}) - (\frac{1}{3}+\frac{1}{4})$
$= \frac{7}{24} = 7/24$ hr

109. $\frac{1}{5}(4\frac{1}{4} + 2\frac{1}{2} + 5 + 4\frac{3}{4} + 3\frac{1}{2})$
$= \frac{1}{5}(20)$
= 4 hrs

110. 8 hours and 45 minutes
$3\frac{1}{2} + 5\frac{1}{4}$
$= 8\frac{3}{4}$ hours
= 8 hrs & 45 min.
($\frac{1}{4}$ hour is 15 minutes)

Drafted by www.MathEnglish.com

Answer Key

1. 961
2. 1681
3. 2601
4. 3721
5. 5041
6. 1024
7. 1764
8. 2704
9. 3844
10. 9.0601
11. 1/105
12. 23/60
13. 31/36
14. 4/135
15. 11/30
16. 19/72
17. 47/144
18. 1/84
19. 58/105
20. 71/100

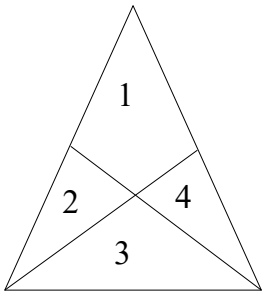
21. 20
22. 20
23. 24
24. 56
25. 32
26. 0.06
27. 0.24
28. 15
29. 0.005
30. 0.028
31. 0.04
32. 0.3
33. 12
34. 0.18
35. 49
36. 15
37. 1.4
38. 0.032
39. 0.2
40. 8

41. 1.2
42. 0.8
43. 90
44. 45
45. 0.4
46. 62.5
47. 18
48. 0.625
49. 1.6
50. 1.8
51. 600
52. 0.036
53. 0.6
54. 0.45
55. 3500
56. 0.6
57. 0.2
58. 0.0875
59. 2400
60. 0.012

61. 100
62. 10
63. 40 (in)
64. 30.
65. 50 (in^2)
66. 460 in^2
67. 128 in
68. 400 in^2
69. 314 in^2
70. 86 in^2
71. 120
72. 64 (sq. in)
73. 75
74. 600 in^2
75. 300 in^2
76. 32
77. 16 (in)
78. 32 cm
79. 150 sq. in
80. 32

Drafted by www.MathEnglish.com

82. 8 triangles
From largest to the smallest as below:
1234,
14, 12, 34, 32,
2, 3, 4



83.
If a man's hand is 12 inches wide, the hand would be a foot!!!

84. $\frac{\text{tax}}{\text{tatal price}} = \frac{1500}{75000} = 0.02 = 2\%$

85. 6÷2 = 3
3×14 = 42 ft

86. $648 = 2\times3\times108 = 2\times3\times3\times6^2 = 2^3\times3^4$

87. 12 min = $\frac{1}{5}$ hr
$\frac{1}{4}\div\frac{1}{5} = \frac{5}{4} = 1\frac{1}{4}$ = 1 1/4 mph

88. B
4 – 1 = 3
12 – 1 = 11
$11^2 = 121$

89. 15÷0.5×3 = 90 packets

90. C

91. 12% = 0.12
200×0.12 = $24.00

92. $5x = 90$
$x = 18$

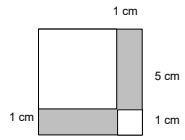
93. 25×5 = 125 mi

94. $38\frac{1}{9} - 31\frac{1}{7} = 7\frac{1}{9} - \frac{1}{7} = 6\frac{61}{63}$ = 6 61/63 pounds

95. speed × time = $30\times1\frac{1}{3} = 40$

96. ∠AFD = 50°
∠EFA = 50°
∠EFC = 180° – 50° – 50° = 80°

97. 11 – 1 = 10
10÷2 = 5
5×5 = 25 cm²



98. $\frac{4}{5}\times\frac{7}{8}\times\frac{2}{3} = \frac{7}{15}$ = 7/15

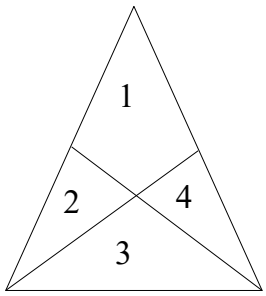
99. D
62 – 46 = 16
$16\times\frac{3}{8} = 6$
7.46 + 0.06 = 7.52

100. B
60÷30 = **2**
5×**2** = 10 (pages per hour by Ann)
60÷20 = **3**
4×**3** = 12 (pages per hour by Ben, faster)

101. $\frac{3}{4}$ = 0.75 = 75%

Answer Key

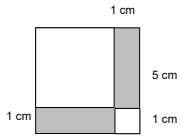
1. $2x^4 - x^2$
2. $-2x^2 - 2x - 2$
3. $9x^2 - 3x + 3$
4. $3x^2 - 6x$
5. $4x^2 - 10$
6. $-6x^3 - 6x^2 - 6x$
7. $4x^2 + 12x - 4$
8. $12x^3 + 8x^2 + 4x$
9. $24x^3 - 12x^2$
10. $4x^3 - 4x^2 - 2x$
11. $2x^4 - 2x^3 + 6x^2$
12. $6x^3 + 2x^2 + 2x$
13. $6x^4 - 9x^3 - 3x^2$
14. $8x^3 - 20x^2 - 12x$
15. $2x^3 + 6x$
16. $2x^3 - 2x^2 - 6x$
17. $-36x^2 + 4$
18. $-2x^4 - 6x^3 - 4x^2$
19. $-15x^3 - 12x^2 - 9x$
20. $-4x^2 - 4x - 6$
21. $x^2 + 7x + 6$
22. $x^2 + 9x + 8$
23. $x^2 + 5x + 4$
24. $3x^2 + 28x + 32$
25. $x^2 - 3x + 2$
26. $x^2 - 8x + 7$
27. $x^2 - 10x + 9$
28. $x^2 - 7x + 12$
29. $2x^2 - 11x + 15$
30. $6x^2 - 5x + 1$
31. $(x - 1)(x + 3)$
32. $(x - 3)(x + 8)$
33. $(x + 2)(x + 6)$
34. $(x + 1)(x + 9)$
35. $(x - 8)(x - 2)$
36. $(x - 5)(x + 2)$
37. $(x - 8)(x + 2)$
38. $(x - 8)(x - 1)$
39. $(3x + 2)(x - 4)$
40. $(3x - 4)(2x + 1)$
41. $6x^2 + 3x$
42. $2x^4 + 4x^3 + 6x^2$
43. $6x^2 + 3x + 2x^2 + 4x + 6$
    $= 8x^2 + 7x + 6$
44. $10x^2$
45. $6x + 3$
46. $-3x^2 + 12x + 6$
47. $6x + 3 + 2x^2 + 4x + 3$
    $= 2x^2 + 10x + 9$
48. $6x + 3 - 3x^2 + 12x + 6$
    $= -3x^2 + 18x + 9$
49. $2(3x^2 - 4x + 7) + 3(5x^2 + x + 11)$
    $= 6x^2 - 8x + 14 + 15x^2 + 3x + 33$
    $= 21x^2 - 5x + 47$
50. $8x^2 - 3x + 18$
51. $-2x^2 + 3x - 4$
52. $5x^2 + 10x + 2$
53. $2x^3 - 4x^2 + 6x$
54. $3(2x^2 + 3) + 2(-4x^2 + 3x - 7)$
    $= 6x^2 + 9 - 8x^2 + 6x - 14$
    $= -2x^2 + 6x - 5$
55. 8 triangles
    From largest to the smallest as below:
    1234,
    14, 12, 34, 32,
    2, 3, 4



56. If a man's hand is 12 inches wide, the hand would be a foot!!!
57. $\frac{\text{tax}}{\text{tatal price}} = \frac{1500}{75000} = 0.02 = 2\%$
58. $6 \div 2 = 3$
    $3 \times 14 = 42$ ft
59. $648 = 2 \times 3 \times 108 = 2 \times 3 \times 3 \times 6^2 = 2^3 \times 3^4$
60. 12 min = $\frac{1}{5}$ hr
    $\frac{1}{4} \div \frac{1}{5} = \frac{5}{4} = 1\frac{1}{4} = 1$ 1/4 mph

Drafted by www.MathEnglish.com

61. B
    4 – 1 = 3
    12 – 1 = 11
    $11^2 = 121$
62. 15÷0.5×3 = 90 packets
63. C
64. 12% = 0.12
    200×0.12 = $24.00
65. $5x = 90$
    $x = 18$
66. 25×5 = 125 mi
67. $38\frac{1}{9} - 31\frac{1}{7} = 7\frac{1}{9} - \frac{1}{7} = 6\frac{61}{63}$ = 6 61/63 pounds
68. speed × time = $30\times1\frac{1}{3} = 40$
69. ∠AFD = 50°
    ∠EFA = 50°
    ∠EFC = 180° – 50° – 50° = 80°
70. 11 – 1 = 10
    10÷2 = 5
    5×5 = 25 cm²



71. $\frac{4}{5}\times\frac{7}{8}\times\frac{2}{3} = \frac{7}{15}$ = 7/15
72. D
    62 – 46 = 16
    $16\times\frac{3}{8} = 6$
    7.46 + 0.06 = 7.52
73. B
    60÷30 = **2**
    5×**2** = 10 (pages per hour by Ann)
    60÷20 = **3**
    4×**3** = 12 (pages per hour by Ben, faster)
74. $\frac{3}{4}$ = 0.75 = 75%
75. 36÷4 = 9 pounds
76. 24
77. .6
78. $\frac{21}{10} = 2\frac{1}{10}$ = 2 1/10
79. 0.7
80. 180÷12 = 15
    15÷3 = 5 yd
81. 3
82. 560000
83. 9
84. 18
85. $\frac{2}{3}$ = 2/3
86. 125
87. 0.024
88. 14.62
89. 6,000,000×10% = 6,000,000×0.1 = $600,000
90. $1\frac{3}{4}\times4\times3$ = 21 (hours)
91. 2000×25% = 2000×0.25 = 500
92. 3157
93. 2(quarter circle) \ square
    = 200π – 400 = 228

    shaded area
    = the square – the leaf
    = 400 – 228
    = 172
94. 60÷.03 = 2000
95. 32000÷400 = 80 sec = 1 min & 20 sec

Answer Key

1. $4x - 10$
2. $-8x^2 + 2x + 27$
3. $-20x^2 - 12x - 23$
4. $-10x^2 + 4x + 2$
5. $13x^2 - 19x - 21$
6. -16
7. -22
8. $19x^6 + 20x^3 + 12x^2 - 17x + 4$
9. $3x^2 - 20x - 35$
10. $16x^6 - 16x^4 + -14x^3 + 5x^2 - 15x$
11. $x^2 + 4x + 3$
12. $x^2 + 5x + 6$
13. $2x^2 + 5x + 3$
14. $6x^2 + 11x + 3$
15. $6x^2 + 13x + 6$
16. $6x^2 + 5x - 6$
17. $6x^2 - 13x + 6$
18. $4x^2 + 16x + 15$
19. $4x^2 - 4x - 15$
20. $4x^2 + 4x - 15$
21. $3x^2 + 4x + 1$
22. $x^2 + 13x + 36$
23. $x^2 - 12x + 35$
24. $x^2 + 5x - 24$
25. $2x^2 - 11x + 9$
26. $6x^2 + 2x - 28$
27. $2x^2 - 13x + 18$
28. $6x^2 - 9x - 27$
29. $36x^2 + 30x + 6$
30. $45x^2 + 14x + 1$
31. $(x - 1)(x + 3)$
32. $(x - 3)(x + 8)$
33. $(x + 2)(x + 6)$
34. $(x + 1)(x + 9)$
35. $(x - 8)(x - 2)$
36. $(x - 5)(x + 2)$
37. $(x - 8)(x + 2)$
38. $(x - 8)(x - 1)$
39. $(x - 5)(x + 7)$
40. $(x - 4)(x + 9)$
41. $(x + 3)(x + 5)$
42. $(x + 2)(x + 9)$
43. $(x - 7)(x - 3)$
44. $(x - 6)(x + 3)$
45. $(x - 9)(x + 3)$
46. $(x - 4)(x + 3)$
47. $(3x - 4)(2x + 1)$
48. $(3x + 2)(x - 4)$
49. $(3x - 5)(x - 4)$
50. $(3x + 4)(2x - 3)$
51. a) -2, $x - 3$, $x - 7$
    b) 3, -7; -2
    c) D, -2, 50
    d) -2, $x + 2$, 50
52. a) 2, $x + 2$, $x - 6$
    b) -2, 6; 2
    c) U, 2, -32
    d) 2, $x - 2$, -32
53. a) 2, $x - 11$, $x - 3$
    b) 11, 3; 7
    c) U, 7, -32
    d) 2, $x - 7$, -32
54. a) 2, $x - 7$, $x - 5$
    b) 7, -5; 1
    c) U, 1, -72
    d) 2, $x - 1$, -72
55. a) 3, $x + 4$, $x - 10$
    b) -4, 10; 3
    c) U, 3, -147
    d) 3, $x - 3$, -147
56. a) $-3, +7$
    b) -2
    c) -2, 62.5
    d) -2.5
    e) -2.5, $-3, +7$
    f) -2.5, -10, 52.5
    g) -2.5, -2, 62.5
57. a) $+2, -6$
    b) 2
    c) 2, -48
    d) 3
    e) 3, $+2, -6$
    f) 3, -12, -36
    g) 3, 2, -48

Drafted by www.MathEnglish.com

58. a) $-11, -3$
    b) 7
    c) 7, -32
    d) 2
    e) $2, -11, -3$
    f) 2, -28, 66
    g) 2, 7, -32
59. a) $-2.5, +7.5$
    b) -2.5
    c) -2.5, -100
    d) 4
    e) $4, -2.5, +7.5$
    f) 4, 20, -75
    g) 4, -2.5, -100
60. a) $+4, -10$
    b) 3
    c) 3, -98
    d) 2
    e) $2, +4, -10$
    f) 2, -12, -80
    g) 2, 3, -98
61. B
62. D
63. C
64. C
65. D
66. D
67. D
68. A
69. D
70. 27
71. C
72. C
73. B
74. C
75. A
76. C
77. B
    $2\times2\times(100-1)\pi = 396\pi$
78. A
79. D
80. A

Drafted by www.MathEnglish.com

46. $\frac{3x+6+12x-8}{12} = \frac{15x-2}{12}$
47. $\frac{3x^2-2x+8}{x(x-4)}$
48. $\frac{3n+90-2n+60}{(n-30)(n+30)} = \frac{n+150}{(n-30)(n+30)}$
49. $\frac{1+4(y-2)}{(y+8)(y-2)} = \frac{4y-7}{(y+8)(y-2)}$
50. $\frac{2x^2+2x+5x-5}{(x+1)(x-1)} = \frac{2x^2+7x-5}{(x+1)(x-1)}$
51. $30y^4z^5$
52. $36x^5yz^4$
53. $4x^2z^2$
54. $6x^5y^3z^3$
55. $5\frac{y^2z}{x}$
56. $4x^2y^2z^2$
57. $1\frac{1}{2}x^2z$
58. $10x$
59. $12x^4y^2z^2$
60. $3y^2z$
61. 4
62. 8
63. $\frac{1}{-3}$
64. 256
65. $\frac{9}{4}$
66. $\frac{27}{8}$
67. 64
68. 8
69. $\frac{1}{2}$
70. $x^{29/30}$
71. x^2y^4
72. x^5y^{10}
73. $\sqrt[3]{x}$
74. $\sqrt[6]{16 \times 8} = \sqrt[6]{2^7} = 2\sqrt[6]{2}$
75. $\sqrt{a^{1+\frac{1}{3}}} = \sqrt{a^{\frac{4}{3}}} = a^{2/3}$
76. $\frac{y^2}{8x}$
77. $\frac{1}{x^{1/3}y^{1/4}}$
78. $\frac{3x^{5/6}}{y^{1/3}}$
79. $x^{7/12}$
80. x^7y^4
81. $x = \sqrt[3]{3}$
82. $3x + 2x + 6 = x$
    $x = \frac{-3}{2}$
83. $4^{x+2} + 4^{x+5} = 65(4^{x+2}) = 130$
    $4^{x+2} = 2$
    $x + 2 = 0.5$
    $x = -1.5$
84. $x = 3$
85. 10^5
86. $a + b = 4c$ and $a - b = 2c \Rightarrow a = 3c$. Substitute it back the first equation, we have $3c + b = 4c \Rightarrow b = c$. Thus, $a:b:c = 3:1:1$.
87. $2^{0.7} = 2^{1-0.3} = 2/\ 2^{0.3} = 2/a^{10}$
88. $(2^a)^b = 3^b = 2 \Rightarrow 2^{ab} = 2 \Rightarrow ab = 1$
89. $(A+B)^3 = (A+B)^2(A+B)$
    $= [A^2 + 2AB + B^2]\ (A+B)$
    Apply distribution, we have
    $= [A^3 + 2A^2B + AB^2] + [A^2B + 2AB^2 + B^3]$
    $= A^3 + 3A^2B + 3AB^2 + B^3$
    $= A^3 + B^3 + 3(A^2B+AB^2)$
90. The interest rate for three month is $\frac{1}{4}r$. Thus, in a year the yield = $m((1 + \frac{1}{4}r)^4 - 1)$ and the yield will be $m((1 + \frac{1}{4}r)^8 - 1)$ in two years.
91. The rectangle has a length of $(c-a)$, and a width of $(b-d)$. Thus, the perimeter is $2(b+c-a-d)$.
92. The area is $(c-a)\times (b-d)$.
93. The length of a diagonal is $\sqrt{(c-a)^2 + (b-d)^2}$.
94. The linear equation must obey the following rule: $\frac{b-d}{a-c} = \frac{y-d}{x-c}$, thus by cross-multiplication, we have $y - d = \frac{b-d}{a-c}(x-c)$
    $\Rightarrow y = \frac{b-d}{a-c}(x-c) + d$
95. The intersection point is $(\frac{a+c}{2}, \frac{b+d}{2})$.
96. Q = (c, b) and S = (a, d)
97. slope(PR) = $\frac{b-d}{a-c}$
    slope(QS) = $-\frac{b-d}{a-c}$
    They are opposite in values.
98. $y - b = -\frac{b-d}{a-c}(x-c)$
    $y = -\frac{b-d}{a-c}(x-c) + b$
99. The radius is $\frac{1}{2}$ of a diagonal = $\frac{1}{2}\sqrt{(c-a)^2 + (b-d)^2}$. Thus, the area of the circle is $\pi r^2 = \pi(\frac{1}{2}\sqrt{(c-a)^2 + (b-d)^2})^2$
    $= \frac{1}{4}\pi[\ (c-a)^2 + (b-d)^2\ ]$
100. $\begin{cases} ax - y < 4 \\ 2x - y > -3 \end{cases}$
    $a = 2$

Drafted by www.MathEnglish.com

Answer Key

1. $2(x + 12)(10x – 1)$
2. $-4(x – 3)(8x + 1)$
3. $3(3x – 4)(4x – 7)$
4. $-2(8x + 3)(x – 3)$
5. $-5(7x + 2)(5x – 6)$
6. $x – 2$
   $x^2 – 4x + 4 =$
   $(x – 2)(x – 2)$
   $2x^2 – 7x + 6 =$
   $(x – 2)(2x – 3)$
7. $x + 2$
   $x^2 + 3x + 2 =$
   $(x + 2)(x + 1)$
   $x^2 + 3x + 2 =$
   $(x + 2)(x + 1)$
8. $4x + 1$
   $12x^2 + 7x + 1 =$
   $(4x + 1)(3x + 1)$
   $12x^2 + 7x + 1 =$
   $(4x + 1)(3x + 1)$
9. $x – 1$
   $4x^2 – 7x + 3 =$
   $(x – 1)(4x – 3)$
   $2x^2 – 3x + 1 =$
   $(x – 1)(2x – 1)$
10. $x + 1$
    $x^2 + 3x + 2 =$
    $(x + 1)(x + 2)$
    $3x^2 + 4x + 1 =$
    $(x + 1)(3x + 1)$
11. $\frac{9}{5}$
12. $\frac{9}{4}$
13. $\frac{9}{5}$
14. $\frac{5}{2}$
15. $\frac{9}{8}$
16. $\frac{7}{5}$
17. $\frac{7}{6}$
18. $\frac{7}{5}$
19. $\frac{7}{8}$
20. $\frac{8}{3}$
21. $5x^2 – 13x – 6 = 0$
    $(5x+2)(x-3) = 0$
    $x = -\frac{5}{2}$ or 3
22. $(4x + 7)(2x – 3) = 0$
    $x = -7/4$ or $\frac{3}{2}$
23. $2x^2 + 13x + 6 = (2x+1)(x+6) = 0$
    $x = -\frac{1}{2}$ or -6
24. $(x+1)(x-1)$
25. $(x+5)(x-5)$
26. $(x+10)(x-10)$
27. $(x+11)(x-11)$
28. $(x+2y)(x-2y)$
29. $(x+6y)(x-6y)$
30. $(3x+y)(3x-y)$
31. $\frac{xy}{2x-y}$
32. $\frac{2x(x-3)}{2y} = \frac{x(x-3)}{y}$
33. $\frac{3(x+4y)}{6xy} = \frac{x+4y}{2xy}$
34. $\frac{6xy(x+1)(x-1)}{x(x+1)(x+4)} = \frac{6y(x-1)}{x+4}$
35. $\frac{15x(x+1)(x-1)}{5x^2(x+1)} = \frac{3(x-1)}{x}$
36. $\frac{x(x+4)}{(x+4)(x-4)} = \frac{x}{x-4}$
37. $\frac{6a+4-5(a+1)}{(a+1)(a-1)}$
    $= \frac{a-1}{(a+1)(a-1)}$
    $= \frac{1}{a+1}$
38. $\frac{a^2+2a+1-2a}{a(a+1)}$
    $= \frac{a^2+1}{a(a+1)}$
39. $\frac{8}{x(x-4)} + \frac{2(x-4)}{x(x-4)}$
    $= \frac{2x}{x(x-4)} = \frac{2}{x-4}$
40. $\frac{4}{x(x+7)} - \frac{x+7}{x(x+7)} = \frac{-(x+3)}{x(x+7)}$
41. $\frac{13x-18}{(x-1)(2x-3)}$
42. $3(\frac{x}{2x+5} + 1) = \frac{3(x+2x+5)}{2x+5} = \frac{3(3x+5)}{2x+5}$
43. $\frac{35b^2}{80a^2b^3} + \frac{12a^3}{80a^2b^3} = \frac{35b^2+12a^3}{80a^2b^3}$
44. $\frac{35a}{60a^2b} - \frac{44b}{60a^2b} = \frac{35a-44b}{60a^2b}$
45. $\frac{a-3(a-2)}{(a-2)(a+2)} = \frac{-2a+6}{(a-2)(a+2)} = \frac{-2(a-3)}{(a-2)(a+2)}$

Drafted by www.MathEnglish.com