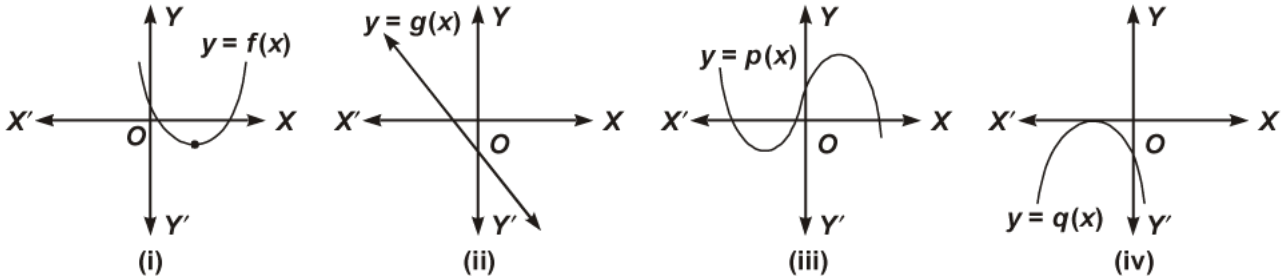
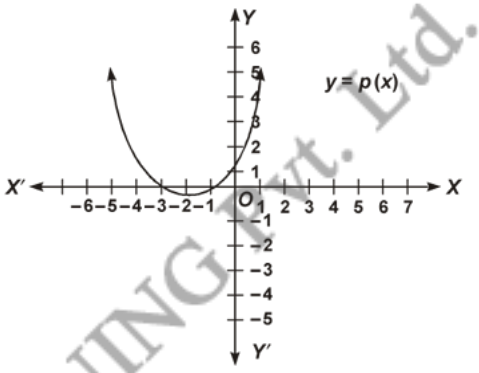
Date: 28/9/2021

Q1. If each one of the following graphs is the graph of a polynomial, then identify which one corresponds to a linear polynomial and which one corresponds to a quadratic polynomial?



Q2. In the figure, the graph of a polynomial $p(x)$ is given. Find the zeros of the polynomial.



Q3. If α and β are the zeros of the quadratic polynomial $p(y) = 5y^2 - 7x + 1$, find value of $\frac{1}{\alpha} + \frac{1}{\beta}$.

Q4. The sum and product of the zeros of a quadratic polynomial are $-\frac{1}{2}$ and – 3 respectively. What is the quadratic polynomial.

Q5. Write the family of quadratic polynomials having $-\frac{1}{4}$ and 1 as its zeros.

Q6. If α, β are the zeros of the polynomial $f(x) = x^2 + x + 1$, then $\frac{1}{\alpha} + \frac{1}{\beta}$ =

(a) 1 (b) – 1 (c) 0 (d) None of these

Q7. For what value of k, – 2 is a zero of the polynomial $3x^2 + 4x + 2k$?

Q8. For what value of k, – 3 is a zero of the polynomial $x^2 + 11x + k$?

Q9. For what value of k, 3 is a zero of the polynomial $2x^2 + x + k$?

Q10. If α and β are the zeros of a polynomial $2y^2 + 7y + 5$, write the value of $\alpha + \beta + \alpha\beta$.

Q11. If α and β are the zeros of a polynomial such that $\alpha + \beta = -6$ and $\alpha\beta = -4$, then write the polynomial.

Q12. If $(x + a)$ is a factor of $2x^2 + 2ax + 5x + 10$, find a.

Q13. For what value of k, – 4 is a zero of the polynomial $x^2 - x - (2k + 2)$?

Q14. Write the zeros of the polynomial $x^2 - x - 6$.

Q15. If two zeros of the polynoial $f(x) = x^3 - 4x^2 - 3x + 12$ are $\sqrt{3}$ and $-\sqrt{3}$, then find its third zero.

Q16. If 1 is a zero of the polynomial $p(x) = ax^2 - 3(a-1)x - 1$, then find the value of a.

Q17. If $x = 1$ is a zero of the polynomial $f(x) = x^3 - 2x^2 + 4x + k$, write the value of k.

Q18. If the sum of the zeros of the quadratic polynomial $f(x) = kx^2 - 3x + 5$ is 1, write the value of k.

Q19. If the product of zeros of the quadratic polynomial $f(x) = x^2 - 4x + k$ is 3, find the value of k.

Q20. If one zero of the polynomial $f(x) = (k^2 + 4)x^2 + 13x + 4k$ is reciprocal of the other, then k =

(a) 2 (b) -2 (c) 1 (d) -1

Q21. If α, β are the zeros of the polynomial $p(x) = 4x^2 + 3x + 7$, then $\frac{1}{\alpha} + \frac{1}{\beta}$ is equal to

(a) $\frac{7}{3}$ (b) $-\frac{7}{3}$ (c) $\frac{3}{7}$ (d) $-\frac{3}{7}$

Q22. If the sum of the zeros of the polynomial $f(x) = 2x^3 - 3kx^2 + 4x - 5$ is 6, then the value of k is

(a) 2 (b) 4 (c) -2 (d) -4

Q23. If the product of zeros of the polynomial $f(x) = ax^3 - 6x^2 + 11x - 6$ is 4, then a =

(a) $\frac{3}{2}$ (b) $-\frac{3}{2}$ (c) $\frac{2}{3}$ (d) $-\frac{2}{3}$

Q24. If α, β, γ are the zeros of the polynomial $f(x) = ax^3 - bx^2 + cx + d$, then $\frac{1}{\alpha} + \frac{1}{\beta} + \frac{1}{\gamma} =$

(a) $-\frac{b}{d}$ (b) $\frac{c}{d}$ (c) $-\frac{c}{d}$ (d) $-\frac{c}{a}$

Q25. If one root of the polynomial $f(x) = 5x^2 + 13x + k$ is reciprocal of the other, then the value of k is

(a) 0 (b) 5 (c) $\frac{1}{6}$ (d) 6

Q26. If the product of two zeros of the polynomial $f(x) = 2x^3 + 6x^2 - 4x + 9$ is 3, then its third zero is

(a) $\frac{3}{2}$ (b) $-\frac{3}{2}$ (c) $\frac{9}{2}$ (d) $-\frac{9}{2}$

Q27. It two zeros of $x^3 + x^2 - 5x - 5$ are $\sqrt{5}$ and $-\sqrt{5}$, then its third zero is

(a) 1 (b) -1 (c) 2 (d) -2

Q28. It two zeroes of the polynomial $x^3 + x^2 - 9x - 9$ are 3 and -3, then its third zero is

(a) -1 (b) 1 (c) -9 (d) 9

Q29. A quadratic polynomial, the sum of whose zeroes is 0 and one zero is 3, is

(a) $x^2 - 9$ (b) $x^2 + 9$ (c) $x^2 + 3$ (d) $x^2 - 3$

Q30. What should be subtracted to the polynomal $x^2 - 16x + 30$, so that 15 is the zero of the resulting polynomial?

(a) 30 (b) 14 (c) 15 (d) 16

Q31. What should be added to the polynomal $x^2 - 5x + 4$, so that 3 is the zero of the resulting polynomial?

(a) 1 (b) 2 (c) 4 (d) 5

Q32. The product of the zeros of $x^3 + 4x^2 + x - 6$ is

(a) -4 (b) 4 (c) 6 (d) -6

Q33. If $x + 2$ is a factor of $x^2 + ax + 2b$ and $a + b = 4$, then

(a) $a = 1,\ b = 3$ (b) $a = 3,\ b = 1$ (c) $a = -1,\ b = 5$ (d) $a = 5,\ b = -1$

Q34. The polynomial which when divided by $-x^2 + x - 1$ gives a quotient $x - 2$ and remainder 3, is

(a) $x^3 - 3x^2 + 3x - 5$ (b) $-x^3 - 3x^2 - 3x - 5$ (c) $-x^3 + 3x^2 - 3x + 5$ (d) $x^3 - 3x^2 - 3x + 5$

Q35. If $\sqrt{5}$ and $-\sqrt{5}$ are two zeros of the polynomial $x^3 + 3x^2 - 5x - 15$, then its third zero is

(a) 3 (b) -3 (c) 5 (d) -5

Q36. Draw the graph of the polynomial $f(x) = 2x - 5$. Also find the corrdinates of the point where it cross X-axis.

Q37. Draw the graph of the polynomial $f(x) = x^2 - 2x - 8$.

Q38. Draw the graph of the quadratic polynomial $f(x) = 3 - 2x - x^2$.

Q39. Lraw the graph of the polynomial $f(x) = x^3$.

Q40. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\alpha^2 + \beta^2$.

Q41. Find the zeros of the quadratic polynomial $f(x) = 6x^2 - 3$, and verify the relationship between the zeros and its coeficients.

Q42. Find the zeros of the quadratic polynomial $x^2 + 7x + 12$, and verify the relation between the zeros and its coefficients.

Q43. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$.

Q44. Find the zeros of the quadratic polynomials and verify the relationship between the zeros and their coefficients: $q(x) = \sqrt{3}x^2 + 10x + 7\sqrt{3}$.

Q45. Find the zeros of the quadratic polynomials and verify the relationship between the zeros and their coefficients: $f(x) = x^2 - (\sqrt{3} + 1)x + \sqrt{3}$.

Q46. Find the zeros of the quadratic polynomials and verify the relationship between the zeros and their coefficients: $g(x) = a(x^2 + 1) - x(a^2 + 1)$.

Q47. If α and β are the zeros of the quadratic polynomial $p(x) = 4x^2 - 5x - 1$, find the value of $\alpha^2\beta + \alpha\beta^2$.

Q48. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 - x - 4$, find the value of $\frac{1}{\beta} + \frac{1}{\alpha} - \alpha\beta$.

Q49. If one zero of the quadratic polynomial $f(x) = 4x^2 - 8kx - 9$ is negative of the other, find the value of k.

Q50. If α and β are the zeros of the quadratic polynomial $f(x) = 6x^2 + x - 2$, find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$.

Q51. If the sum of the zeros of the quadratic polynomial $f(t) = kt^2 + 2t + 3k$ is equal to their product, find the value of k.

Q52. Find the condition which must be satisfied by the coefficient of the polynomial $f(x) = x^3 - px^2 + qx - r$ when the sum of its two zeros is zero.

Q53. If the zeros of the polynomial $f(x) = x^3 - 12x^2 + 39x + k$ are in A.P., find the value of k.

Q54. Find the zeros of the polynomial $f(x) = x^3 - 5x^2 - 16x + 80$, if its two zeros are equal in magnitude but opposite in sign.

Q55. Divide the polynomial $f(x) = 14x^3 - 5x^2 + 9x - 1$ by the polynomial $f(x) = 2x - 1$. Also, find the quotient and remainder.

Q56. Divide the polynomial $u(x) = 9x^4 - 4x^2 + 4$ by the polynomial $v(x) = 3x^2 + x - 1$. Also, find the quotient and remainder.

Q57. What must be subtracted from $8x^4 + 14x^3 - 2x^2 + 7x - 8$ so that the resulting polynomial is exactly divisible by $4x^2 + 3x - 2$.

Q58. By applying division algorithm prove that the polynomial $g(x) = x^2 + 3x + 1$ is a factor of the polynomial $f(x) = 3x^4 + 5x^3 - 7x^2 + 2x + 2$.

Q59. Divide the polynomial $f(x) = 30x^3 + 11x^3 - 82x^2 - 12x + 48$ by $3x^2 + 2x - 4$. Also, find the quotient and remainder.

Q60. What must be added to $f(x) = 4x^4 + 2x^3 - 2x^2 + x - 1$ so that the resulting polynomial is divisible by $g(x) = x^2 + 2x - 3$.

Q61. Obtain all zeros of $f(x) = x^3 + 13x^2 + 32x + 20$, if one of its zeros is -2.

Q62. If $f(x) = x^3 + x^2 - ax + b$ is divisible by $x^2 - x$, write the values of a and b.

Q63. Find the zeros of the quadratic polynomal $f(x) = abx^2 + (b^2 - ac)x - bc$, and verify the relationship between the zeros and its coefficients.

Q64. Find the zeros of the polynomial $f(x) = 4\sqrt{3}x^2 + 5x - 2\sqrt{5}$, and verify the relationship between the zeros and its coefficients.

Q65. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - px + 4$, then find the value of

(i) $\alpha^2 + \beta^2$ (ii) $\frac{1}{\alpha} + \frac{1}{\beta}$

Q66. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\alpha^3 + \beta^3$.

Q67. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\frac{1}{\alpha^3} + \frac{1}{\beta^3}$.

Q68. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\frac{\alpha^2}{\beta^2} + \frac{\beta^2}{\alpha^2}$.

Q69. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$.

Q70. If α and β are the zeros of the polynomial $f(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$, find the value of k.

Q71. If α and β are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$, then evaluate $\alpha^4 + \beta^4$.

Q72. If α and β are the zeros of the quadratic polynomial $f(x) = kx^2 + 4x + 4$ such that $\alpha^2 + \beta^2 = 24$, find the values of k.

Q73. If α and β are the zeros of the polynomial $f(x) = 2x^2 + 5x + k$ satisfying the relation $\alpha^2 + \beta^2 + \alpha\beta = \frac{21}{4}$, then find the value of k for this to be possible.

Q74. If sum of the squares of zeros of the quadratic polynomial $f(x) = x^2 - 8x + k$ is 40, find the value of k.

Q75. If α and β are the zeros of the quadratic polynomial $f(x) = 2x^2 - 5x + 7$, find a polynomial whose zeros are $2\alpha + 3\beta$ and $3\alpha + 2\beta$.

Q76. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - x - 2$, find a polynomial whose zeros are $2\alpha + 1$ and $2\beta + 1$.

Q77. If α and β are the zeros of the quadratic polynomial $f(x) = 3x^2 - 4x + 1$, find a quarratic polynomial whose zeros are $\frac{\alpha^2}{\beta}$ and $\frac{\beta^2}{\alpha}$.

Q78. Find a quadratic polynomial whos zeros are reciprocals of the zeros of the polynomial

$$f(x) = ax^2 + bx + c, \qquad a \neq 0,\ c \neq 0.$$

Q79. If α and β are the zeros of the quadratic polynomial $f(t) = t^2 - 4t + 3$, find the value of $\alpha^3\beta^3 + \alpha^3\beta^4$.

Q80. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 + x - 2$, find value of $\frac{1}{\alpha} - \frac{1}{\beta}$.

Q81. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 5x + 4$, find value of $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$.

Q82. If α and β are the zeros of the quadratic polynomial $p(s) = 3s^2 - 6s + 4$, find value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} + 2\left(\frac{1}{\alpha} + \frac{1}{\beta}\right) + 3\alpha\beta$.

Q83. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - p(x+1) - c$, show that $(\alpha+1)(\beta+1) = 1 - c$.

Q84. If the squared difference of the zeros of the quadratic polymomial $f(x) = x^2 + px + 45$ is equal to 144, find the value of p.

Q85. If α and β are the zeros of the quadratic polynomial such that $\alpha + \beta = 24$ and $\alpha - \beta = 8$, find a quadratic polynomial having α and β as its zeros.

Q86. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 1$, find a quadratic polynomial whose zeros are $\frac{2\alpha}{\beta}$ and $\frac{2\beta}{\alpha}$.

Q87. Divide the polynomial $f(x) = 3x^2 - x^3 - 3x + 5$ by the polynomial $g(x) = x - 1 - x^2$ and verify the division algorithm.

Q88. If the polynomial $6x^4 + 8x^3 + 17x^2 + 21x + 7$ is divided by another polynomial $3x^2 + 4x + 1$, the remainder comes out to be $ax + b$, find a and b.

Q89. What must be subtracted from the polynomial $f(x) = x^4 + 2x^3 - 13x^2 - 12x + 21$ so that the resulting polynomial is exactly divisible by $x^2 - 4x + 3$?

Q90. What must be added to the polynomial $f(x) = x^4 + 2x^3 - 2x^2 + x - 1$ so that the resulting polynomial is exactly divisible by $x^2 + 2x - 3$?

Q91. Obtain all zeros of the polynomial $f(x) = x^4 - 3x^3 - x^2 + 9x - 6$, if two of its zeros is $-\sqrt{3}$ and $\sqrt{3}$.

Q92. Obtain all zeros of the polynomial $f(x) = 2x^4 + x^3 - 14x^2 - 19x - 6$, if two of its zeros is -2 and -1.

Q93. Find the values of a and b so that $x^4 + x^3 + 8x^2 + ax + b$ is divisible by $x^2 + 1$.

Q94. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 3x - 2$, find a quadratic polynomial whose zeros are $\frac{1}{2\alpha + \beta}$ and $\frac{1}{2\beta + \alpha}$.

Q95. Find the condition that the zeros of the polynomial $f(x) = x^3 - px^2 + qx - r$ may be in arithmetic progression.

Q96. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 2x + 3$, find a quadratic polynomial whose roots are

(i) $\alpha + 2, \beta + 2$

(ii) $\frac{\alpha - 1}{\alpha + 1}, \frac{\beta - 1}{\beta + 1}$ and $\frac{1}{2\beta + \alpha}$.

Q97. Find the zeros of the polynomial $f(x) = x^3 - 5x^2 - 2x + 24$, if it is given that the product of its two zeros is 12.

Q98. Find the zeros of the polynomial $f(x) = x^3 - 12x^2 + 39x - 28$, if it is given that the zeros are in A.P.

Q99. Find all the zeros of the polynomial $2x^3 + x^2 - 6x - 3$, if two of its zeros are $-\sqrt{3}$ and $\sqrt{3}$.

Q100 Find all the zeros of the polynomial $2x^4 + 7x^3 - 19x^2 - 14x + 30$, if two of its zeros are $\sqrt{2}$ and $-\sqrt{2}$.

Q101 Find all the zeros of the polynomial $x^4 + x^3 - 34x^2 - 4x + 120$, if two of its zeros are 2 and -2.

Q102 Find all zeros of the polynomial $f(x) = 2x^4 - 2x^3 - 7x^2 + 3x + 6$, it its two zeros are $-\sqrt{\frac{3}{2}}$ and $\sqrt{\frac{3}{2}}$.

Q103 Find all the zeros of the polynomial $x^3 - 3x^2 - 2x - 6$, if two of its zeros are $-\sqrt{2}$ and $\sqrt{2}$.

Date: 30/9/2021

S1. $\frac{2}{5}$.

S2. 0.98.

S3. 0.005.

S4. $\frac{7}{13}$.

S5. $\frac{2}{5}$.

S6. 0.7.

S7. When we toss a coin, the outcomes head and tail are equally likely. So, the result of an individual coin toss is completely unpredictable.

S8. 1.

S9. $\frac{1}{2}$.

S10. $\frac{1}{26}$.

S11. $\frac{1}{3}$.

S12. $\frac{1}{3}$.

S13. (b) $\frac{5}{9}$.

S14. $\frac{21}{26}$.

S15. $\frac{2}{7}$.

S16. (b) $\frac{1}{3}$.

S17. (c) $\frac{3}{7}$.

S18. (d) $\frac{7}{9}$.

S19. (c) 4.

S20. (b) $\frac{3}{10}$.

S21. (b) $\frac{1}{7}$.

S22. (b) 1.

S23. (d) 1.6.

S24. (b) -1.5.

S25. (b) $\frac{7}{36}$.

S26. (c) $\frac{1}{3}$.

S27. (d) $\frac{1}{7}$.

S28. (b) $\frac{1}{13}$.

S29. (c) $\frac{2}{3}$.

S30. (b) $\frac{5}{9}$.

S31. (c) $\frac{5}{7}$.

S32. (d) $\frac{5}{6}$.

S33. (c) $\frac{17}{90}$.

S34. (d) $\frac{23}{50}$.

S35. (a) $\frac{1}{2}$.

S36. (c) $\frac{1}{2}$.

S37. (c) $\frac{1}{6}$.

S38. (b) $\frac{1}{6}$.

S39. (c) $\frac{4}{45}$.

S40. (c) $\frac{1}{5}$.

S41. (a) $\frac{7}{8}$.

S42. (c) $\frac{4}{25}$.

S43. (c) $\frac{3}{4}$.

S44. (d) $\frac{1}{4}$.

S45. (d) $\frac{12}{13}$.

S46. (c) $\frac{1}{3}$.

S47. $\frac{9}{25}$.

S48. $\frac{2}{5}$.

S49. $\frac{1}{5}$.

S50. $\frac{1}{12}$.

S51. $\frac{1}{6}$.

S52. (i) $\frac{7}{24}$ (ii) $\frac{5}{24}$ (iii) $\frac{5}{6}$

S53. $\frac{5}{12}$.

S54. $\frac{3}{10}$.

S55. (i) $\frac{2}{5}$ (ii) $\frac{4}{15}$ (iii) $\frac{2}{3}$ (iv) $\frac{2}{3}$

S56. (i) $\frac{1}{3}$ (ii) $\frac{1}{4}$ (iii) $\frac{5}{12}$ (iv) $\frac{3}{4}$

S57. (i) $\frac{7}{13}$ (ii) $\frac{11}{13}$

S58. $\frac{1}{6}$.

S59. $\frac{3}{4}$.

S60. $\frac{2}{3}$.

S61. $\frac{5}{9}$.

S62. (i) $\frac{1}{7}$ (ii) $\frac{3}{7}$ (iii) $\frac{2}{7}$

S63. $\frac{16}{25}$.

S64. (i) $\frac{13}{20}$ (ii) $\frac{13}{20}$ (iii) $\frac{1}{4}$

S65. $\frac{1}{2}$.

S66. (i) $\frac{13}{49}$ (ii) $\frac{3}{49}$ (iii) $\frac{10}{49}$ (iv) $\frac{1}{49}$

S67. $\frac{2}{7}$.

S68. (i) $\frac{1}{2}$ (ii) $\frac{1}{3}$ (iii) $\frac{2}{3}$ (iv) $\frac{1}{6}$ (v) $\frac{1}{3}$ (vi) $\frac{1}{2}$ (vii) $\frac{2}{3}$ (viii) $\frac{1}{2}$ (ix) $\frac{1}{3}$

S69. (i) $\frac{9}{17}$ (ii) $\frac{7}{17}$ (iii) $\frac{5}{17}$ (iv) $\frac{2}{17}$

S70. (i) $\frac{5}{36}$ (ii) $\frac{1}{6}$ (iii) $\frac{1}{12}$ (iv) $\frac{1}{12}$ (v) $\frac{1}{6}$ (vi) $\frac{1}{2}$ (vii) $\frac{11}{36}$

S71. $\frac{5}{9}$.

S72. The jar contains 12 white marbles.

S73. (i) $\frac{1}{2}$ (ii) $\frac{3}{25}$ (iii) $\frac{9}{100}$ (iv) $\frac{2}{25}$

S74. $\frac{25\pi - 48}{25\pi}$.

S75. (a) $\frac{1}{5}$. (ii) (a) $\frac{3}{4}$. (b) 0.

S76. Total number of marbles in the jar = 24.

S77. (i) $\frac{1}{26}$ (ii) $\frac{7}{13}$ (iii) $\frac{1}{26}$ (iv) $\frac{3}{13}$ (v) $\frac{9}{13}$ (vi) $\frac{9}{13}$

S78. $\frac{1}{7}$.

S79. (i) $\frac{3}{8}$ (ii) $\frac{7}{8}$ (iii) $\frac{3}{4}$ (iv) $\frac{1}{8}$

S80. $\frac{3}{8}$.

S81. $\frac{2}{9}$.

S82. $\frac{1}{7}$.

S83. (i) $\frac{1}{4}$ (ii) $\frac{1}{9}$ (iii) $\frac{11}{36}$ (iv) $\frac{25}{36}$

S84. (i) $\frac{1}{8}$ (ii) $\frac{3}{8}$ (iii) $\frac{3}{8}$ (iv) $\frac{1}{2}$

S85. $\frac{4}{9}$.

S86. 12.

S87. (i) $\frac{5}{24}$ (ii) $\frac{1}{16}$

S88. (i) $\frac{1}{22}$ (ii) $\frac{9}{22}$ (iii) $\frac{1}{22}$ (iv) $\frac{3}{22}$

S89. (i) $\frac{11}{35}$ (ii) $\frac{1}{7}$ (iii) $\frac{16}{35}$

S90. (i) $\frac{81}{81}$ (ii) $\frac{8}{89}$ (iii) $\frac{13}{17}$

S91. (i) $\frac{4}{9}$ (ii) $\frac{2}{9}$

S92. (i) $\frac{5}{36}$ (ii) $\frac{5}{36}$ (iii) $\frac{1}{12}$

S93. (i) $\frac{11}{36}$ (ii) $\frac{5}{18}$

S94. (i) $\frac{2}{3}$ (ii) $\frac{1}{5}$ (iii) $\frac{5}{6}$

S95. (i) $\frac{1}{4}$ (ii) $\frac{3}{4}$

S96. (i) $\frac{25}{36}$ (ii) $\frac{11}{36}$ (iii) $\frac{1}{36}$

S97. (i) $\frac{13}{49}$ (ii) $\frac{3}{49}$ (iii) $\frac{10}{49}$

S98. (i) $\frac{3}{20}$ (ii) $\frac{3}{20}$

S99. (i) 0 (ii) $\frac{1}{2}$

S100. (i) $\frac{1}{22}$ (ii) $\frac{1}{2}$

S101. (i) $\frac{25}{49}$ (ii) $\frac{9}{49}$ (iii) $\frac{1}{7}$ (iv) $\frac{1}{49}$

S102. (i) $\frac{1}{2}$ (ii) $\frac{2}{25}$ (iii) $\frac{1}{5}$ (iv) $\frac{1}{10}$

S103. (i) $\frac{5}{9}$ (ii) $\frac{1}{6}$ (iii) $\frac{17}{18}$ (iv) $\frac{7}{18}$

S104. (i) $\frac{10}{23}$ (ii) $\frac{3}{23}$ (iii) $\frac{13}{46}$

S105. (i) $\frac{1}{12}$ (ii) $\frac{1}{2}$ (iii) $\frac{1}{6}$ (iv) $\frac{1}{24}$

S106. (i) $\frac{5}{11}$ (ii) $\frac{6}{11}$ (iii) $\frac{9}{44}$ (iv) $\frac{9}{44}$

S107. (i) $\frac{4}{5}$ (ii) $\frac{2}{5}$

S108. (i) $\frac{1}{13}$ (ii) $\frac{1}{2}$ (iii) $\frac{7}{13}$ (iv) $\frac{1}{26}$ (v) $\frac{3}{13}$ (vi) $\frac{3}{26}$ (vii) $\frac{1}{52}$ (viii) $\frac{1}{26}$.

S109. (i) $\frac{1}{2}$ (ii) $\frac{5}{12}$ (iii) $\frac{1}{6}$ (iv) $\frac{1}{12}$ (v) $\frac{11}{36}$ (vi) $\frac{1}{6}$ (vii) $\frac{1}{3}$