

## Przykładowe zadania

### Odpowiedzi do zadań zamkniętych

|                   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| <b>Nr zadania</b> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| <b>Odpowiedź</b>  | A | C | B | A | A | B | D | B | D | A  | D  | C  | C  | A  | B  | D  | C  | C  | B  | B  | B  | D  | B  | C  | C  |

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| A  | C  | D  | A  | B  | C  | B  | C  | B  | C  | B  | A  | C  | B  | B  | A  | A  | A  | B  | B  | C  | A  | D  | B  | B  |

### Odpowiedzi do zadań otwartych

| Nr zadania | Odpowiedź   |
|------------|---|
| 51         | $x = \frac{5}{8}$   |
| 52         | $x = 2, y = 1$  |
| 53         | $x \in \langle -7, 1 \rangle$                               |
| 54         | $x = \frac{1}{2}$ lub $x = \sqrt{3}$ lub<br>$x = -\sqrt{3}$ |
| 55         | $y = -\frac{1}{3}x + \frac{7}{3}$                           |
| 56         | $x = -\frac{1}{2}$  |
| 57         | wykres  |
| 58         | $y = -4$  |
| 59         | $a = 1 \quad b = 1$   |
| 60         | $\frac{-x^2 + 6x + 3}{(x-3)(x+1)}$                          |
| 61         | $2x - y = 0$  |
| 62         | $(x-3)^2 + (y+5)^2 = 9$                                     |
| 63         | $(x-3)^2 + (y+5)^2 = 34$                                    |
| 64         | $y = 2x - 4$  |
| 65         | $\frac{2}{5}$   |

| Nr zadania | Odpowiedź            |
|------------|----------------------|
| 80         | 30 trójkątów         |
| 81         | $x = 7$              |
| 82         | 0,9                  |
| 83         | 1                    |
| 84         | 1                    |
| 85         | $\frac{7}{11}$       |
| 86         | $\frac{1}{15}$       |
| 87         | $\frac{1}{18}$       |
| 88         | 0,4                  |
| 89         | 0,4                  |
| 90         | 162                  |
| 91         | $60\pi$              |
| 92         | $\frac{\sqrt{3}}{3}$ |
| 93         | dowód                |
| 94         | dowód                |

|    |                                |
|----|--------------------------------|
| 66 | $\frac{47}{15}$                |
| 67 | $36^\circ, 72^\circ, 72^\circ$ |
| 68 | 60                             |
| 69 | $c = 10$                       |
| 70 | $c = 6$ lub $c = 10$           |
| 71 | $c = 8$ lub $c = 2\sqrt{34}$   |
| 72 | $x = 5$ lub $x = 6$            |
| 73 | $ BD  = 16$                    |
| 74 | 5 wyrazów                      |
| 75 | $x = 7$                        |
| 76 | $a_{15} = 72$                  |
| 77 | 2125                           |
| 78 | 9 liczb                        |
| 79 | 72 liczby                      |

|     |  |
|-----|--|
| 95  | 10392  |
| 96  | $\frac{7}{10}$   |
| 97  | 7 km/h, 14 km/h  |
| 98  | 15   |
| 99  | $\begin{cases} a = 3 \\ b = 15 \\ c = 75 \end{cases}$ lub $\begin{cases} a = 31 \\ b = 31 \\ c = 31 \end{cases}$ |
| 100 | $a_n = 2$ lub $a_n = 3n - 7$   |
| 101 | $20\sqrt{313}$   |
| 102 | $\frac{64\sqrt{209}}{3}$   |
| 103 | $2\sqrt{145}$  |
| 104 | $\frac{750}{169}$  |
| 105 | dowód  |
| 106 | dowód  |
| 107 | dowód  |
| 108 | dowód  |