Задача В- 1 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{9\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 1, \\ u|_{t=0} = 0, \quad 0 \le x \le 1, \\ u_t|_{t=0} = 2\sin 3\pi x - \frac{1}{3}\sin\ 2\pi x, \quad 0 \le x \le 1, \\ u|_{x=0} = 0, \quad u|_{x=1} = 0, \quad t \ge 0. \end{array}\right.$$

Задача В- 2 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{16\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 2, \\ u|_{t=0} = 0,\ \ 0 \le x \le 2, \\ u_t|_{t=0} = 3\sin\frac{4\pi x}{2} - \frac{1}{4}\sin\frac{3\pi x}{2},\ \ 0 \le x \le 2, \\ u|_{x=0} = 0,\ \ u|_{x=2} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 3 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{25\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 3, \\ u|_{t=0} = 0,\ \ 0 \le x \le 3, \\ u_t|_{t=0} = 4\sin\frac{5\pi x}{3} - \frac{1}{5}\sin\frac{4\pi x}{3},\ \ 0 \le x \le 3, \\ u|_{x=0} = 0,\ \ u|_{x=3} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 4 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{36\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 4, \\ u|_{t=0} = 0,\ \ 0 \le x \le 4, \\ u_t|_{t=0} = 5 \sin \frac{6\pi x}{4} - \frac{1}{6} \sin \frac{5\pi x}{4},\ \ 0 \le x \le 4, \\ u|_{x=0} = 0,\ \ u|_{x=4} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 5 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{49\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 5, \\ u|_{t=0} = 0,\ \ 0 \le x \le 5, \\ u_t|_{t=0} = 6 \sin \frac{7\pi x}{5} - \frac{1}{7} \sin \frac{6\pi x}{5},\ \ 0 \le x \le 5, \\ u|_{x=0} = 0,\ \ u|_{x=5} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 6 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{64\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 6, \\ u|_{t=0} = 0,\ \ 0 \le x \le 6, \\ u_t|_{t=0} = 7 \sin \frac{8\pi x}{6} - \frac{1}{8} \sin \frac{7\pi x}{6},\ \ 0 \le x \le 6, \\ u|_{x=0} = 0,\ \ u|_{x=6} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 7 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{81\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 7, \\ u|_{t=0} = 0,\ \ 0 \le x \le 7, \\ u_t|_{t=0} = 8 \sin \frac{9\pi x}{7} - \frac{1}{9} \sin \frac{8\pi x}{7},\ \ 0 \le x \le 7, \\ u|_{x=0} = 0,\ \ u|_{x=7} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 8 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{100\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 8, \\ u|_{t=0} = 0,\ \ 0 \le x \le 8, \\ u_t|_{t=0} = 9 \sin \frac{10\pi x}{8} - \frac{1}{10} \sin \frac{9\pi x}{8},\ \ 0 \le x \le 8, \\ u|_{x=0} = 0,\ \ u|_{x=8} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 9 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{121\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 9, \\ u|_{t=0} = 0,\ \ 0 \le x \le 9, \\ u_t|_{t=0} = 10 \sin \frac{11\pi x}{9} - \frac{1}{11} \sin \frac{10\pi x}{9},\ \ 0 \le x \le 9, \\ u|_{x=0} = 0,\ \ u|_{x=9} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 10 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{9\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 10, \\ u|_{t=0} = 0, \quad 0 \le x \le 10, \\ u_t|_{t=0} = 2\sin\frac{3\pi x}{10} - \frac{1}{3}\sin\frac{2\pi x}{10}, \quad 0 \le x \le 10, \\ u|_{x=0} = 0, \quad u|_{x=10} = 0, \quad t \ge 0. \end{array}\right.$$

Задача B- 11 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{16\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 11, \\ u|_{t=0} = 0,\ \ 0 \le x \le 11, \\ u_t|_{t=0} = 3\sin\frac{4\pi x}{11} - \frac{1}{4}\sin\frac{3\pi x}{11},\ \ 0 \le x \le 11, \\ u|_{x=0} = 0,\ \ u|_{x=11} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 12 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{25\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 12, \\ u|_{t=0} = 0,\ \ 0 \le x \le 12, \\ u_t|_{t=0} = 4 \sin \frac{5\pi x}{12} - \frac{1}{5} \sin \frac{4\pi x}{12},\ \ 0 \le x \le 12, \\ u|_{x=0} = 0,\ \ u|_{x=12} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 13 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{36\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 13, \\ u|_{t=0} = 0,\ \ 0 \le x \le 13, \\ u_t|_{t=0} = 5 \sin \frac{6\pi x}{13} - \frac{1}{6} \sin \frac{5\pi x}{13},\ \ 0 \le x \le 13, \\ u|_{x=0} = 0,\ \ u|_{x=13} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 14 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{49\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 14, \\ u|_{t=0} = 0, \quad 0 \le x \le 14, \\ u_t|_{t=0} = 6 \sin \frac{7\pi x}{14} - \frac{1}{7} \sin \frac{6\pi x}{14}, \quad 0 \le x \le 14, \\ u|_{x=0} = 0, \quad u|_{x=14} = 0, \quad t \ge 0. \end{array}\right.$$

Задача B- 15 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{64\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 15, \\ u|_{t=0} = 0,\ \ 0 \le x \le 15, \\ u_t|_{t=0} = 7 \sin \frac{8\pi x}{15} - \frac{1}{8} \sin \frac{7\pi x}{15},\ \ 0 \le x \le 15, \\ u|_{x=0} = 0,\ \ u|_{x=15} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 16 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{81\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 16, \\ u|_{t=0} = 0,\ \ 0 \le x \le 16, \\ u_t|_{t=0} = 8 \sin \frac{9\pi x}{16} - \frac{1}{9} \sin \frac{8\pi x}{16},\ \ 0 \le x \le 16, \\ u|_{x=0} = 0,\ \ u|_{x=16} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 17 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{100\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 17, \\ u|_{t=0} = 0,\ \ 0 \le x \le 17, \\ u_t|_{t=0} = 9 \sin \frac{10\pi x}{17} - \frac{1}{10} \sin \frac{9\pi x}{17},\ \ 0 \le x \le 17, \\ u|_{x=0} = 0,\ \ u|_{x=17} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 18 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{121\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 18, \\ u|_{t=0} = 0, \quad 0 \le x \le 18, \\ u_t|_{t=0} = 10 \sin \frac{11\pi x}{18} - \frac{1}{11} \sin \frac{10\pi x}{18}, \quad 0 \le x \le 18, \\ u|_{x=0} = 0, \quad u|_{x=18} = 0, \quad t \ge 0. \end{array}\right.$$

Задача B- 19 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{9\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 19, \\ u|_{t=0} = 0, \quad 0 \le x \le 19, \\ u_t|_{t=0} = 2\sin\frac{3\pi x}{19} - \frac{1}{3}\sin\frac{2\pi x}{19}, \quad 0 \le x \le 19, \\ u|_{x=0} = 0, \quad u|_{x=19} = 0, \quad t \ge 0. \end{array}\right.$$

Задача В- 20 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{16\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 20, \\ u|_{t=0} = 0,\ \ 0 \le x \le 20, \\ u_t|_{t=0} = 3\sin\frac{4\pi x}{20} - \frac{1}{4}\sin\frac{3\pi x}{20},\ \ 0 \le x \le 20, \\ u|_{x=0} = 0,\ \ u|_{x=20} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 21 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{25\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 21, \\ u|_{t=0} = 0,\ \ 0 \le x \le 21, \\ u_t|_{t=0} = 4 \sin \frac{5\pi x}{21} - \frac{1}{5} \sin \frac{4\pi x}{21},\ \ 0 \le x \le 21, \\ u|_{x=0} = 0,\ \ u|_{x=21} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача В- 22 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{36\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 22, \\ u|_{t=0} = 0,\ \ 0 \le x \le 22, \\ u_t|_{t=0} = 5 \sin \frac{6\pi x}{22} - \frac{1}{6} \sin \frac{5\pi x}{22},\ \ 0 \le x \le 22, \\ u|_{x=0} = 0,\ \ u|_{x=22} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 23 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{49\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 23, \\ u|_{t=0} = 0,\ \ 0 \le x \le 23, \\ u_t|_{t=0} = 6 \sin \frac{7\pi x}{23} - \frac{1}{7} \sin \frac{6\pi x}{23},\ \ 0 \le x \le 23, \\ u|_{x=0} = 0,\ \ u|_{x=23} = 0,\ \ t \ge 0. \end{array}\right.$$

Задача B- 24 Решете задачата

$$\left|\begin{array}{l} u_{xx} - \frac{1}{64\pi^2} u_{tt} = 0,\ t > 0,\ 0 < x < 24, \\ u|_{t=0} = 0,\ \ 0 \le x \le 24, \\ u_t|_{t=0} = 7 \sin \frac{8\pi x}{24} - \frac{1}{8} \sin \frac{7\pi x}{24},\ \ 0 \le x \le 24, \\ u|_{x=0} = 0,\ \ u|_{x=24} = 0,\ \ t \ge 0. \end{array}\right.$$