

013 Уравнения Ответы

№	Ответ	№	Ответ
1.101	а) 2 и $2\sqrt{2}$; б) 2.	1.102	а) -4 ; 0; б) 0.
1.103	а) 0; $-\log_2 19$; б) $-\log_2 19$.	1.104	а) $\{\log_2 3; \log_2 5\}$, б) $\log_2 5$.
1.105	а) $\{\log_3 2; \log_3 7\}$, б) $\log_3 7$.	1.106	а) $\frac{1}{2}$ и 2; б) $\frac{1}{2}$.
1.107	а) -2 и 16; б) -2 .	1.108	а) $2\sqrt{2}$ и $4\sqrt{2}$; б) $4\sqrt{2}$
1.109	а) $\left\{ \frac{\pi}{2} + \pi k, (-1)^k \frac{\pi}{6} + \pi k : k \in \mathbb{Z} \right\}$; б) $\frac{13\pi}{6}; \frac{5\pi}{2}; \frac{17\pi}{6}; \frac{7\pi}{2}$.		
1.110	а) $x = \pi k, x = \pm \frac{2\pi}{3} + 2\pi k, k \in \mathbb{Z}$; б) $2\pi, \frac{8\pi}{3}, 3\pi$.		
1.111	а) $\left\{ -\frac{\pi}{6} + 2\pi k; \frac{\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\frac{11\pi}{6}; \frac{13\pi}{6}$.		
1.112	а) $\left\{ \frac{\pi}{4} + 2\pi k, -\frac{\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{7\pi}{4}$.		
1.113	а) $\left\{ -\frac{\pi}{3} + 2\pi k, \frac{\pi}{3} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\frac{5\pi}{3}; \frac{7\pi}{3}$.		
1.114	$\left\{ -\frac{\pi}{3} + 2\pi k : k \in \mathbb{Z} \right\}$.		
1.115	а) $\left\{ \frac{\pi}{4} + \pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{11\pi}{4}; -\frac{7\pi}{4}$.		
1.116	а) $\left\{ \pi + 2\pi k, \frac{\pi}{3} + 2\pi k, -\frac{\pi}{3} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $3\pi; \frac{11\pi}{3}$.		
1.117	а) $\left\{ \frac{\pi}{6} + 2\pi k, \frac{5\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{19\pi}{6}$.		

1.118	a) $\left\{-\frac{3\pi}{4} + 2\pi n; \frac{3\pi}{4} + 2\pi n : n \in \mathbb{Z}\right\}$; б) $-\frac{5\pi}{4}; -\frac{3\pi}{4}$.
1.119	a) $\left\{\frac{\pi}{3} + 2\pi k, \frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{7\pi}{3}; \frac{8\pi}{3}$.
1.120	a) $\{\pi k : k \in \mathbb{Z}\}$; б) $2\pi; 3\pi$.
1.121	a) $\left\{-\frac{\pi}{3} + 2\pi n; -\frac{2\pi}{3} + 2\pi n; \frac{\pi}{2} + \pi n : n \in \mathbb{Z}\right\}$; б) $-\frac{\pi}{2}; -\frac{\pi}{3}; \frac{\pi}{2}; \frac{4\pi}{3}; \frac{3\pi}{2}$.
1.122	a) $\left\{\frac{\pi}{4} + 2\pi k, \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{7\pi}{4}, -\frac{5\pi}{4}$.
1.123	a) $\left\{\frac{\pi}{3} + \pi k : k \in \mathbb{Z}\right\}$; б) $\frac{10\pi}{3}, \frac{13\pi}{3}$.
1.124	a) $\left\{\pi + 2\pi k, -\frac{2\pi}{3} + 2\pi k, \frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{8\pi}{3}; 3\pi$.
1.125	a) $\left\{\frac{\pi}{2} + \pi k, \frac{5\pi}{4} + 2\pi k, -\frac{\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{\pi}{2}; -\frac{3\pi}{4}; -\frac{3\pi}{2}$.
1.126	a) $\left\{\frac{\pi}{6} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{13\pi}{6}$.
1.127	a) $\left\{\frac{\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{17\pi}{4}$.
1.128	a) $\left\{\frac{\pi}{6} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{23\pi}{6}$.
1.129	a) $\left\{\pi - \arcsin\left(\frac{3}{5}\right) + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\pi - \arcsin\left(\frac{3}{5}\right)$.
1.130	a) $\left\{-\frac{\pi}{6} + 2\pi k, -\frac{5\pi}{6} + 2\pi k, \frac{\pi}{2} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{13\pi}{6}; -\frac{3\pi}{2}$.

1.131	а) $x = -\frac{\pi}{4} + \pi n, n \in \mathbb{Z}; \arctg 3 + \pi n, n \in \mathbb{Z};$ б) $-\frac{17\pi}{4};$ $\arctg 3 - 4\pi; -\frac{13\pi}{4}.$
1.132	а) $x = \frac{\pi}{4} + \pi n, n \in \mathbb{Z}; -\arctg 0,5 + \pi n, n \in \mathbb{Z};$ б) $-\frac{23\pi}{4}; -\arctg 0,5 - 5\pi; -\frac{19\pi}{4}$

1.133	а) $\frac{\pi}{6} + 2\pi n, n \in \mathbb{Z}; \frac{5\pi}{6} + 2\pi m, m \in \mathbb{Z};$ б) $-\frac{7\pi}{6}.$
1.134	а) $-2; 1;$ б) $-2.$
1.135	а) $-\frac{\pi}{4} + 2\pi n, n \in \mathbb{Z}; -\frac{3\pi}{4} + 2\pi m, m \in \mathbb{Z};$ б) $\frac{5\pi}{4}; \frac{7\pi}{4}.$
1.136	а) $-\frac{\pi}{4} + 2\pi n, n \in \mathbb{Z}; -\frac{3\pi}{4} + 2\pi m, m \in \mathbb{Z};$ б) $\frac{7\pi}{4}.$
1.137	а) $-\frac{\pi}{4} + 2\pi n, n \in \mathbb{Z}; -\frac{3\pi}{4} + 2\pi m, m \in \mathbb{Z};$ б) $\frac{13\pi}{4}; \frac{15\pi}{4}.$
1.138	а) $-\frac{\pi}{2} + 2\pi k; \frac{\pi}{3} + 2\pi n; -\frac{\pi}{3} + 2\pi m; k, n, m \in \mathbb{Z}$ б) $\frac{3\pi}{2}; \frac{5\pi}{3}; \frac{7\pi}{3}$
1.139	а) $\pm \frac{\pi}{3} + 2\pi n; \pm \frac{2\pi}{3} + 2\pi m; k, m \in \mathbb{Z}$ б) $\frac{7\pi}{3}; \frac{8\pi}{3}; \frac{10\pi}{3}$
1.140	а) $\{-2; -1\}$ б) $\{-1\}$
1.141	а) $\left\{ \pi k, \frac{\pi}{4} + 2\pi k, \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\};$ б) $-2\pi, -3\pi, -\frac{13\pi}{4}.$
1.142	а) $\left\{ \frac{\pi}{6} + 2\pi k, \frac{\pi}{2} + \pi k, \frac{11\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\};$ б) $\frac{5\pi}{2}, \frac{13\pi}{6}$ и $\frac{7\pi}{2}.$
1.143	а) $\left\{ -\frac{\pi}{4} + 2\pi k, \pi k, \frac{5\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\};$ б) $-\frac{9\pi}{4}, -2\pi, -\pi.$
1.144	а) $\left\{ \pi k, \frac{\pi}{4} + 2\pi k, \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\};$ б) $-2\pi, -3\pi, -\frac{13\pi}{4}.$

1.145	a) $\left\{ \pi k, \frac{5\pi}{4} + 2\pi k, \frac{7\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $2\pi, 3\pi, \frac{7\pi}{4}$.
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1.146	a) $\left\{ \pi k; \pm \frac{\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-4\pi, -\frac{15\pi}{4}, -3\pi$.
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1.147	a) $\left\{ \pi k; \pm \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\pi, 2\pi, \frac{3\pi}{4}, \frac{5\pi}{4}$.
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1.148	a) $\left\{ \frac{\pi}{2} + \pi k; -\frac{\pi}{4} + \pi k : k \in \mathbb{Z} \right\}$ б) $\frac{7\pi}{2}; \frac{15\pi}{4}; \frac{9\pi}{2}$.
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1.149	a) $\left\{ \frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{11\pi}{6}, -\frac{7\pi}{6}$.
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1.150	a) $\left\{ \frac{\pi}{8} + \frac{\pi k}{4}; \frac{\pi}{2} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{3\pi}{8}, -\frac{\pi}{8}, \frac{\pi}{8}$.
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1.151.	a) $\left\{ \frac{1}{2}; \frac{3}{2} \right\}$; б) $\frac{1}{2}$.
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1.152	a) $\{1; 3\}$, б) 1.
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1.153	a) $\{-2; 2\}$; б) -2.
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1.154	a) $\left\{ \pi k, \frac{7\pi}{6} + 2\pi k, \frac{11\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\pi, \frac{7\pi}{6}, \frac{11\pi}{6}, 2\pi$.
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1.155	a) $\left\{ \frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k; \frac{\pi}{2} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\frac{5\pi}{2}, \frac{17\pi}{6}$.
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1.156	a) $\left\{ \pi k; \frac{\pi}{3} + 2\pi k; \frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $-\frac{10\pi}{3}, -3\pi, -2\pi$.
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1.157	a) $\left\{ -\frac{\pi}{3} + 2\pi k; \frac{\pi}{6} + 2\pi k; \frac{\pi}{3} + 2\pi k; \frac{5\pi}{6} + 2\pi k : k \in \mathbb{Z} \right\}$; б) $\frac{17\pi}{6}; \frac{11\pi}{3}$.
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1.158	а) $\left\{-\frac{2\pi}{3} + 2\pi k, \frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{14\pi}{3}$.
1.159	а) $\left\{-\frac{\pi}{2} + 2\pi k; 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{7\pi}{2}, 4\pi$.
1.160	а) $\left\{2\pi k; -\frac{\pi}{6} + 2\pi n; -\frac{5\pi}{6} + 2\pi m : k, n, m \in \mathbb{Z}\right\}$; б) $2\pi; \frac{19\pi}{6}$.
1.161	а) $\left\{\pi k; \pm \frac{5\pi}{6} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-3\pi; -\frac{17\pi}{6}; -2\pi$.
1.162	а) $\left\{\pi k; \pm \frac{\pi}{6} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $3\pi, \frac{23\pi}{6}, 4\pi$.

1.163	а) $\left\{\frac{\pi}{2} + \pi k; \frac{\pi}{4} + 2\pi k; \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{3\pi}{2}, \frac{9\pi}{4}, \frac{5\pi}{2}, \frac{11\pi}{4}$.
1.164	а) $\left\{\frac{\pi}{2} + \pi k; \frac{\pi}{3} + 2\pi k; \frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{5\pi}{2}, -\frac{5\pi}{3}, -\frac{3\pi}{2}$.
1.165	а) $\left\{\frac{\pi}{2} + 2\pi k; \pm \frac{3\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{5\pi}{4}, \frac{5\pi}{2}$.
1.166	а) $\left\{\frac{2\pi}{3} + 2\pi k; -\frac{2\pi}{3} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{14\pi}{3}$.
1.167	а) $\left\{\pi k; \frac{3\pi}{4} + 2\pi k; \frac{5\pi}{4} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\pi, \frac{5\pi}{4}, 2\pi$.
1.168	а) $\left\{\pm \frac{\pi}{6} + \pi k, : k \in \mathbb{Z}\right\}$; б) $\frac{17\pi}{6}; \frac{19\pi}{6}; \frac{23\pi}{6}$.
1.169	а) $\left\{\frac{\pi}{6} + 2\pi k, \frac{5\pi}{6} + 2\pi k, \frac{\pi}{2} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $-\frac{23\pi}{6}; -\frac{7\pi}{2}$.
1.170	а) $\left\{\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k : k \in \mathbb{Z}\right\}$; б) $\frac{13\pi}{6}$.