Radián (3)

1. *Hodnoty sin x v radiánech*

1) Určete funkční hodnoty:

$\sin \frac{5\pi}{6} =$

$\sin \frac{\pi}{3} =$

$\sin \frac{7\pi}{4} =$

$\sin \pi =$

$\sin \frac{5\pi}{6} = \frac{1}{2}$

$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$

$\sin \frac{7\pi}{4} = -\frac{\sqrt{2}}{2}$

$\sin \pi = 0$

2) Určete funkční hodnoty:

$\sin \frac{3\pi}{4} =$

$\sin \frac{3\pi}{2} =$

$\sin \frac{11\pi}{6} =$

$\sin \frac{2\pi}{3} =$

$\sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2}$

$\sin \frac{3\pi}{2} = -1$

$\sin \frac{11\pi}{6} = -\frac{1}{2}$

$\sin \frac{2\pi}{3} = \frac{\sqrt{3}}{2}$

3) Určete funkční hodnoty:

$\sin \frac{4\pi}{3} =$

$\sin \frac{5\pi}{4} =$

$\sin 2\pi =$

$\sin \frac{5\pi}{6} =$

$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$

$\sin \frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$

$\sin 2\pi = 0$

$\sin \frac{5\pi}{6} = \frac{1}{2}$

4) Určete funkční hodnoty:

$\sin \frac{11\pi}{6} =$

$\sin \frac{\pi}{4} =$

$\sin \frac{5\pi}{3} =$

$\sin \frac{\pi}{2} =$

$\sin \frac{11\pi}{6} = -\frac{1}{2}$

$\sin \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

$\sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2}$

$\sin \frac{\pi}{2} = 1$

2. *Hodnoty cos x v radiánech*

1) Určete funkční hodnoty:

$\cos \frac{\pi}{3} =$

$\cos \frac{\pi}{2} =$

$\cos \frac{7\pi}{4} =$

$\cos \frac{5\pi}{6} =$

$\cos \frac{\pi}{3} = \frac{1}{2}$

$\cos \frac{\pi}{2} = 0$

$\cos \frac{7\pi}{4} = \frac{\sqrt{2}}{2}$

$\cos \frac{5\pi}{6} = -\frac{\sqrt{3}}{2}$

2) Určete funkční hodnoty:

$\cos \frac{7\pi}{6} =$

$\cos \frac{3\pi}{4} =$

$\cos \frac{5\pi}{3} =$

$\cos \pi =$

$\cos \frac{7\pi}{6} = -\frac{\sqrt{3}}{2}$

$\cos \frac{3\pi}{4} = -\frac{\sqrt{2}}{2}$

$\cos \frac{5\pi}{3} = \frac{1}{2}$

$\cos \pi = -1$

3) Určete funkční hodnoty:

$\cos \frac{5\pi}{4} =$

$\cos \frac{4\pi}{3} =$

$\cos \frac{\pi}{6} =$

$\cos \frac{3\pi}{2} =$

$\cos \frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$

$\cos \frac{4\pi}{3} = -\frac{1}{2}$

$\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}$

$\cos \frac{3\pi}{2} = 0$

4) Určete funkční hodnoty:

$\cos \frac{5\pi}{6} =$

$\cos \frac{\pi}{4} =$

$\cos \frac{11\pi}{6} =$

$\cos 2\pi =$

$\cos \frac{5\pi}{6} = -\frac{\sqrt{3}}{2}$

$\cos \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

$\cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2}$

$\cos 2\pi = 1$

3. *Hodnoty tg x v radiánech*

1) Určete funkční hodnoty:

$tg \frac{\pi}{3} =$

$tg \frac{\pi}{4} =$

$tg \pi =$

$tg \frac{5\pi}{6} =$

$tg \frac{\pi}{3} = \sqrt{3}$

$tg \frac{\pi}{4} = 1$

$tg \pi = 0$

$tg \frac{5\pi}{6} = -\frac{1}{\sqrt{3}}$

2) Určete funkční hodnoty:

$tg \frac{3\pi}{4} =$

$tg \frac{3\pi}{2} =$

$tg \frac{11\pi}{6} =$

$tg \frac{2\pi}{3} =$

$tg \frac{3\pi}{4} = -1$

$tg \frac{3\pi}{2} = NŘ$

$tg \frac{11\pi}{6} = -\frac{1}{\sqrt{3}}$

$tg \frac{2\pi}{3} = -\sqrt{3}$

3) Určete funkční hodnoty:

$tg \frac{4\pi}{3} =$

$tg \frac{5\pi}{4} =$

$tg 2\pi =$

$tg \frac{5\pi}{6} =$

$tg \frac{4\pi}{3} = \sqrt{3}$

$tg \frac{5\pi}{4} = 1$

$tg 2\pi = 0$

$tg \frac{5\pi}{6} = -\frac{1}{\sqrt{3}}$

4) Určete funkční hodnoty:

$tg \frac{\pi}{4} =$

$tg \frac{5\pi}{3} =$

$tg \frac{\pi}{2} =$

$tg \frac{\pi}{6} =$

$tg \frac{\pi}{4} = 1$

$tg \frac{5\pi}{3} = -\sqrt{3}$

$tg \frac{\pi}{2} = NŘ$

$tg \frac{\pi}{6} = \frac{1}{\sqrt{3}}$

4. *Hodnoty cotg x v radiánech*

1) Určete funkční hodnoty:

$cotg \frac{\pi}{3} =$

$cotg \frac{\pi}{2} =$

$cotg \frac{\pi}{4} =$

$cotg \frac{5\pi}{6} =$

$cotg \frac{\pi}{3} = \frac{1}{\sqrt{3}}$

$cotg \frac{\pi}{2} = 0$

$cotg \frac{\pi}{4} = 1$

$cotg \frac{5\pi}{6} = -\sqrt{3}$

2) Určete funkční hodnoty:

$cotg \frac{\pi}{6} =$

$cotg \frac{3\pi}{4} =$

$cotg \frac{5\pi}{3} =$

$cotg \pi =$

$cotg \frac{\pi}{6} = \sqrt{3}$

$cotg \frac{3\pi}{4} = -1$

$cotg \frac{5\pi}{3} = -\frac{1}{\sqrt{3}}$

$cotg \pi = NŘ$

3) Určete funkční hodnoty:

$cotg \frac{5\pi}{4} =$

$cotg \frac{4\pi}{3} =$

$cotg \frac{\pi}{6} =$

$cotg \frac{3\pi}{2} =$

$cotg \frac{5\pi}{4} = 1$

$cotg \frac{4\pi}{3} = \frac{1}{\sqrt{3}}$

$cotg \frac{\pi}{6} = \sqrt{3}$

$cotg \frac{3\pi}{2} = 0$

4) Určete funkční hodnoty:

$cotg \frac{5\pi}{6} =$

$cotg \frac{\pi}{4} =$

$cotg \frac{11\pi}{6} =$

$cotg 2\pi =$

$cotg \frac{5\pi}{6} = -\sqrt{3}$

$cotg \frac{\pi}{4} = 1$

$cotg \frac{11\pi}{6} = -\sqrt{3}$

$cotg 2\pi = NŘ$

5. Hodnoty sin x posunuté

1) Určete funkční hodnoty:

$\sin \frac{25\pi}{3} =$

$\sin \left(-\frac{\pi}{4}\right) =$

$\sin 11\pi =$

$\sin \frac{31\pi}{6} =$

$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$

$\sin \frac{7\pi}{4} = -\frac{\sqrt{2}}{2}$

$\sin \pi = 0$

$\sin \frac{7\pi}{6} = -\frac{1}{2}$

2) Určete funkční hodnoty:

$\sin \frac{19\pi}{4} =$

$\sin \frac{27\pi}{2} =$

$\sin \frac{23\pi}{6} =$

$\sin \left(-\frac{16\pi}{3}\right) =$

$\sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2}$

$\sin \frac{3\pi}{2} = -1$

$\sin \frac{11\pi}{6} = -\frac{1}{2}$

$\sin \frac{2\pi}{3} = \frac{\sqrt{3}}{2}$

3) Určete funkční hodnoty:

$\sin \left(-\frac{26\pi}{3}\right) =$

$\sin \frac{29\pi}{4} =$

$\sin 12\pi =$

$\sin \frac{17\pi}{6} =$

$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$

$\sin \frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$

$\sin 2\pi = 0$

$\sin \frac{5\pi}{6} = \frac{1}{2}$

4) Určete funkční hodnoty:

$\sin \frac{33\pi}{4} =$

$\sin \frac{17\pi}{3} =$

$\sin \frac{21\pi}{2} =$

$\sin \left(-\frac{23\pi}{6}\right) =$

$\sin \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

$\sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2}$

$\sin \frac{\pi}{2} = 1$

$\sin \frac{\pi}{6} = \frac{1}{2}$

6. Hodnoty cos x posunuté

1) Určete funkční hodnoty:

$\cos \left(-\frac{17\pi}{3}\right) =$

$\cos \frac{29\pi}{2} =$

$\cos \frac{15\pi}{4} =$

$\cos \frac{12\pi}{6} =$

$\cos \frac{\pi}{3} = \frac{1}{2}$

$\cos \frac{\pi}{2} = 0$

$\cos \frac{7\pi}{4} = \frac{\sqrt{2}}{2}$

$\cos \frac{5\pi}{6} = -\frac{\sqrt{3}}{2}$

2) Určete funkční hodnoty:

$\cos \frac{31\pi}{6} =$

$\cos \left(-\frac{29\pi}{4}\right) =$

$\cos \frac{23\pi}{6} =$

$\cos 13\pi =$

$\cos \frac{7\pi}{4} = -\frac{\sqrt{3}}{2}$

$\cos \frac{3\pi}{4} = -\frac{\sqrt{2}}{2}$

$\cos \frac{5\pi}{3} = \frac{1}{2}$

$\cos \pi = -1$

3) Určete funkční hodnoty:

$\cos \frac{21\pi}{4} =$

$\cos \frac{22\pi}{4} =$

$\cos \left(-\frac{35\pi}{6}\right) =$

$\cos \frac{31\pi}{2} =$

$\cos \frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$

$\cos \frac{4\pi}{3} = -\frac{1}{2}$

$\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}$

$\cos \frac{3\pi}{2} = 0$

4) Určete funkční hodnoty:

$\cos \frac{17\pi}{6} =$

$\cos \frac{41\pi}{4} =$

$\cos \frac{34\pi}{6} =$

$\cos (-2\pi) =$

$\cos \frac{5\pi}{6} = -\frac{\sqrt{3}}{2}$

$\cos \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

$\cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2}$

$\cos 2\pi = 1$

7. Hodnoty tg x posunuté

1) Určete funkční hodnoty:

$\text{tg} \frac{37\pi}{3} =$

$\text{tg} \frac{33\pi}{4} =$

$\text{tg} (-5\pi) =$

$\text{tg} \frac{43\pi}{6} =$

$\text{tg} \frac{\pi}{3} = \sqrt{3}$

$\text{tg} \frac{\pi}{4} = 1$

$\text{tg} \pi = 0$

$\text{tg} \frac{5\pi}{6} = -\frac{1}{\sqrt{3}}$

2) Určete funkční hodnoty:

$\text{tg} \frac{11\pi}{4} =$

$\text{tg} \left(-\frac{21\pi}{2}\right) =$

$\text{tg} \frac{35\pi}{6} =$

$\text{tg} \frac{20\pi}{3} =$

$\text{tg} \frac{3\pi}{6} = -1$

$\text{tg} \frac{3\pi}{2} = \text{NŘ}$

$\text{tg} \frac{11\pi}{6} = -\frac{1}{\sqrt{3}}$

$\text{tg} \frac{2\pi}{3} = -\sqrt{3}$

3) Určete funkční hodnoty:

$\text{tg} \frac{28\pi}{4} =$

$\text{tg} \frac{45\pi}{3} =$

$\text{tg} (-12\pi) =$

$\text{tg} \frac{17\pi}{6} =$

$\text{tg} \frac{4\pi}{3} = \sqrt{3}$

$\text{tg} \frac{5\pi}{4} = 1$

$\text{tg} 2\pi = 0$

$\text{tg} \frac{5\pi}{6} = -\frac{1}{\sqrt{3}}$

4) Určete funkční hodnoty:

$\text{tg} \frac{33\pi}{4} =$

$\text{tg} \frac{23\pi}{3} =$

$\text{tg} \frac{25\pi}{2} =$

$\text{tg} \left(-\frac{35\pi}{6}\right) =$

$\text{tg} \frac{\pi}{4} = 1$

$\text{tg} \frac{5\pi}{3} = -\sqrt{3}$

$\text{tg} \frac{\pi}{2} = \text{NŘ}$

$\text{tg} \frac{\pi}{6} = \frac{1}{\sqrt{3}}$

8. Hodnoty cotg x posunuté

1) Určete funkční hodnoty:

$\text{cotg} \left(-\frac{11\pi}{3}\right) =$

$\text{cotg} \frac{9\pi}{2} =$

$\text{cotg} \frac{25\pi}{4} =$

$\text{cotg} \frac{17\pi}{6} =$

$\text{cotg} \frac{\pi}{3} = \frac{1}{\sqrt{3}}$

$\text{cotg} \frac{\pi}{2} = 0$

$\text{cotg} \frac{\pi}{4} = 1$

$\text{cotg} \frac{5\pi}{6} = -\sqrt{3}$

2) Určete funkční hodnoty:

$\text{cotg} \frac{49\pi}{6} =$

$\text{cotg} \frac{11\pi}{4} =$

$\text{cotg} \left(-\frac{\pi}{3}\right) =$

$\text{cotg} 7\pi =$

$\text{cotg} \frac{\pi}{6} = \sqrt{3}$

$\text{cotg} \frac{3\pi}{4} = -1$

$\text{cotg} \frac{5\pi}{3} = -\frac{1}{\sqrt{3}}$

$\text{cotg} \pi = \text{NŘ}$

3) Určete funkční hodnoty:

$\text{cotg} \frac{21\pi}{4} =$

$\text{cotg} \left(-\frac{20\pi}{3}\right) =$

$\text{cotg} \frac{37\pi}{6} =$

$\text{cotg} \frac{7\pi}{2} =$

$\text{cotg} \frac{5\pi}{4} = 1$

$\text{cotg} \frac{4\pi}{3} = \frac{1}{\sqrt{3}}$

$\text{cotg} \frac{\pi}{6} = \sqrt{3}$

$\text{cotg} \frac{3\pi}{2} = 0$

4) Určete funkční hodnoty:

$\text{cotg} \frac{29\pi}{6} =$

$\text{cotg} \frac{41\pi}{4} =$

$\text{cotg} \frac{23\pi}{6} =$

$\text{cotg} (-6\pi) =$

$\text{cotg} \frac{5\pi}{6} = -\sqrt{3}$

$\text{cotg} \frac{\pi}{4} = 1$

$\text{cotg} \frac{11\pi}{6} = -\sqrt{3}$

$\text{cotg} 2\pi = \text{NŘ}$