

73

$$f(x) = \sin x$$

$$f'(x) = \cos x$$

$$f''(x) = -\sin x$$

$$f'''(x) = -\cos x$$

$$f^{(4)}(x) = \sin x$$

$$f^{(5)}(x) = \cos x$$

$$f^{(6)}(x) = -\sin x$$

$$f^{(7)}(x) = -\cos x$$

$$f^{(8)}(x) = \sin x$$

$$f^{(9)}(x) = \cos x$$

$$f^{(10)}(x) = -\sin x$$

$$f^{(11)}(x) = -\cos x$$

$$f^{(12)}(x) = \sin x$$

$$f^{(13)}(x) = \cos x$$

$$f^{(14)}(x) = -\sin x$$

$$f^{(15)}(x) = -\cos x$$

$$f^{(16)}(x) = \sin x$$

$$f^{(17)}(x) = \cos x$$

$$f^{(18)}(x) = -\sin x$$

$$f^{(19)}(x) = -\cos x$$

$$f^{(20)}(x) = \sin x$$

$$f^{(21)}(x) = \cos x$$

$$f^{(22)}(x) = -\sin x$$

$$f^{(23)}(x) = -\cos x$$

$$f^{(24)}(x) = \sin x$$

$$f^{(25)}(x) = \cos x$$

$$f^{(26)}(x) = -\sin x$$

$$f^{(27)}(x) = -\cos x$$

$$f^{(28)}(x) = \sin x$$

$$f^{(29)}(x) = \cos x$$

$$f^{(30)}(x) = -\sin x$$

$$f^{(31)}(x) = -\cos x$$

$$f^{(32)}(x) = \sin x$$

$$f^{(33)}(x) = \cos x$$

$$f^{(34)}(x) = -\sin x$$

$$f^{(35)}(x) = -\cos x$$

$$f^{(36)}(x) = \sin x$$

$$f^{(37)}(x) = \cos x$$

$$f^{(38)}(x) = -\sin x$$

$$f^{(39)}(x) = -\cos x$$

$$f^{(40)}(x) = \sin x$$

$$f^{(41)}(x) = \cos x$$

$$f^{(42)}(x) = -\sin x$$

$$f^{(43)}(x) = -\cos x$$

$$f^{(44)}(x) = \sin x$$

$$f^{(45)}(x) = \cos x$$

$$f^{(46)}(x) = -\sin x$$

$$f^{(47)}(x) = -\cos x$$

$$f^{(48)}(x) = \sin x$$

$$f^{(49)}(x) = \cos x$$

$$f^{(50)}(x) = -\sin x$$

$$f^{(51)}(x) = -\cos x$$

$$f^{(52)}(x) = \sin x$$

$$f^{(53)}(x) = \cos x$$

$$f^{(54)}(x) = -\sin x$$

$$f^{(55)}(x) = -\cos x$$

$$f^{(56)}(x) = \sin x$$

$$f^{(57)}(x) = \cos x$$

$$f^{(58)}(x) = -\sin x$$

$$f^{(59)}(x) = -\cos x$$

$$f^{(60)}(x) = \sin x$$

$$f^{(61)}(x) = \cos x$$

$$f^{(62)}(x) = -\sin x$$

$$f^{(63)}(x) = -\cos x$$

$$f^{(64)}(x) = \sin x$$

$$f(x) = \cos x$$

$$f'(x) = -\sin x$$

$$f''(x) = -\cos x$$

$$f'''(x) = \sin x$$

$$f^{(4)}(x) = \cos x$$

$$f^{(5)}(x) = -\sin x$$

$$f^{(6)}(x) = -\cos x$$

$$f^{(7)}(x) = \sin x$$

$$f^{(8)}(x) = \cos x$$

$$f^{(9)}(x) = -\sin x$$

$$f^{(10)}(x) = -\cos x$$

$$f^{(11)}(x) = \sin x$$

$$f^{(12)}(x) = \cos x$$

$$f^{(13)}(x) = -\sin x$$

$$f^{(14)}(x) = -\cos x$$

$$f^{(15)}(x) = \sin x$$

$$f^{(16)}(x) = \cos x$$

$$f^{(17)}(x) = -\sin x$$

$$f^{(18)}(x) = -\cos x$$

$$f^{(19)}(x) = \sin x$$

$$f^{(20)}(x) = \cos x$$

$$f^{(21)}(x) = -\sin x$$

$$f^{(22)}(x) = -\cos x$$

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$$f^{(44)}(x) = \cos x$$

$$f^{(45)}(x) = -\sin x$$

$$f^{(46)}(x) = -\cos x$$

$$f^{(47)}(x) = \sin x$$

$$f^{(48)}(x) = \cos x$$

$$f^{(49)}(x) = -\sin x$$

$$f^{(50)}(x) = -\cos x$$

$$f^{(51)}(x) = \sin x$$

$$f^{(52)}(x) = \cos x$$

$$f^{(53)}(x) = -\sin x$$

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$$f^{(55)}(x) = \sin x$$

$$f^{(56)}(x) = \cos x$$

$$f^{(57)}(x) = -\sin x$$

$$f^{(58)}(x) = -\cos x$$

$$f^{(59)}(x) = \sin x$$

$$f^{(60)}(x) = \cos x$$

$$f^{(61)}(x) = -\sin x$$

$$f^{(62)}(x) = -\cos x$$

$$f^{(63)}(x) = \sin x$$

$$f^{(64)}(x) = \cos x$$

$$f^{(n)}(x) = \sin\left(x + \frac{n\pi}{2}\right)$$