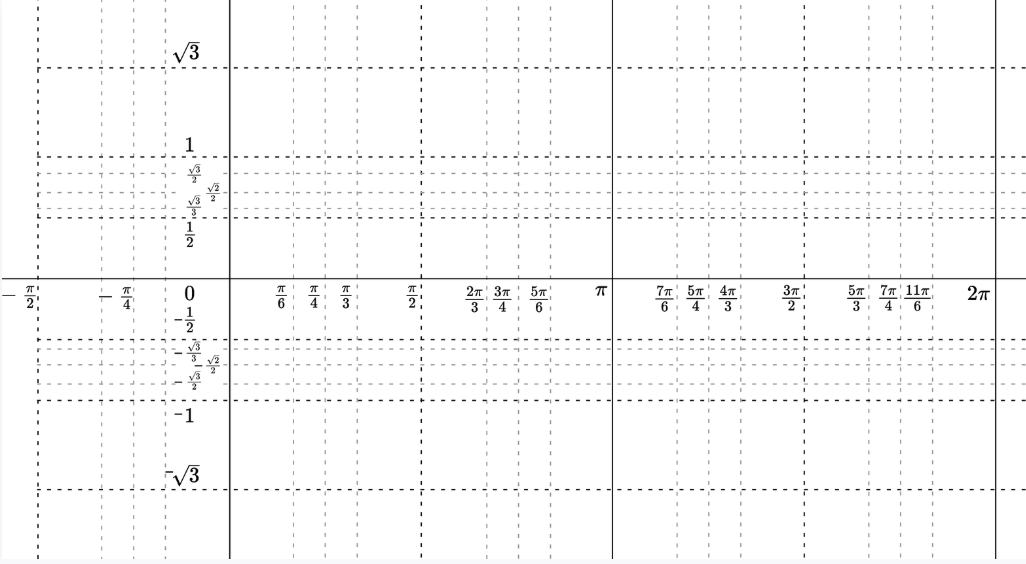
GRAPHING THE COSINE FUNCTION

|  |  |
| --- | --- |
| x | *f(x)* = cos x |
| 0 |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
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|  |  |
|  |  |

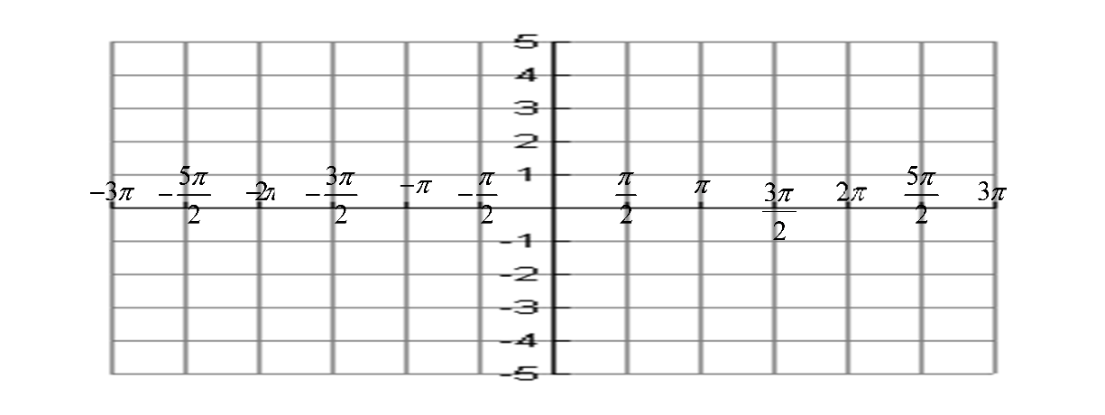


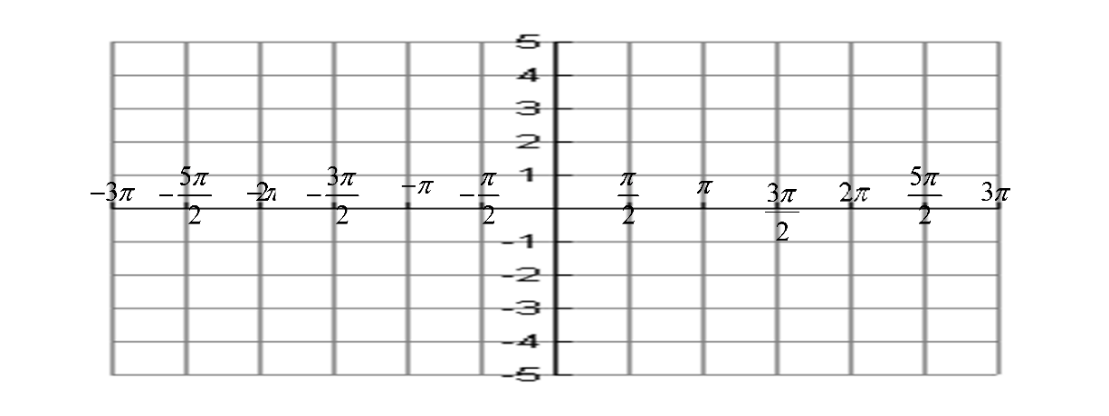
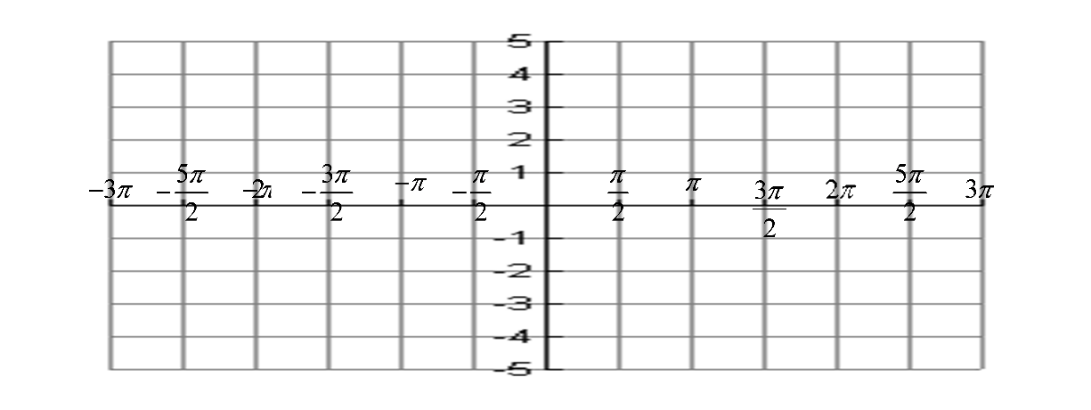
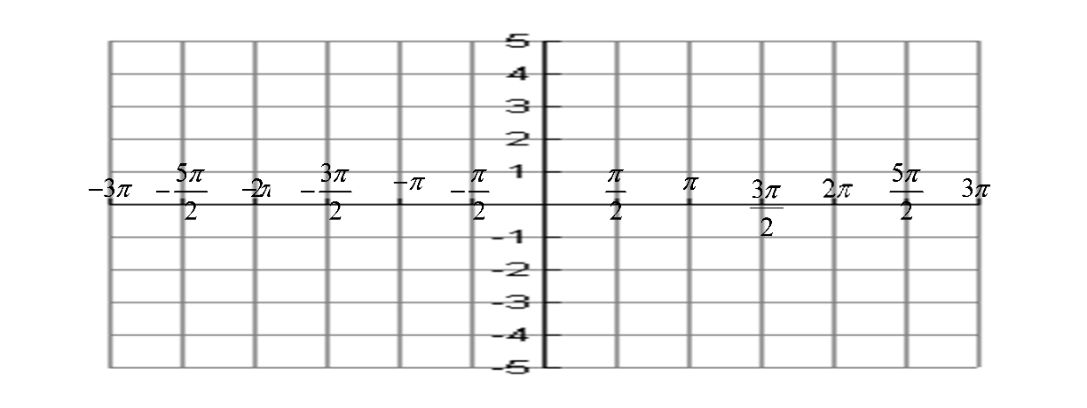
**Characteristics of the cosine function:**

* + - * **Domain:**
      * **Range:**
      * **Absolute max:**
      * **Absolute min:**
      * **Symmetry:**
      * **Continuity:**
      * **Bounded/Unbounded**

AMPLITUDE AND VERTICAL SHIFTS

Graph each of the following functions. State the amplitude and the vertical shift.

1. 2. 3. 4.

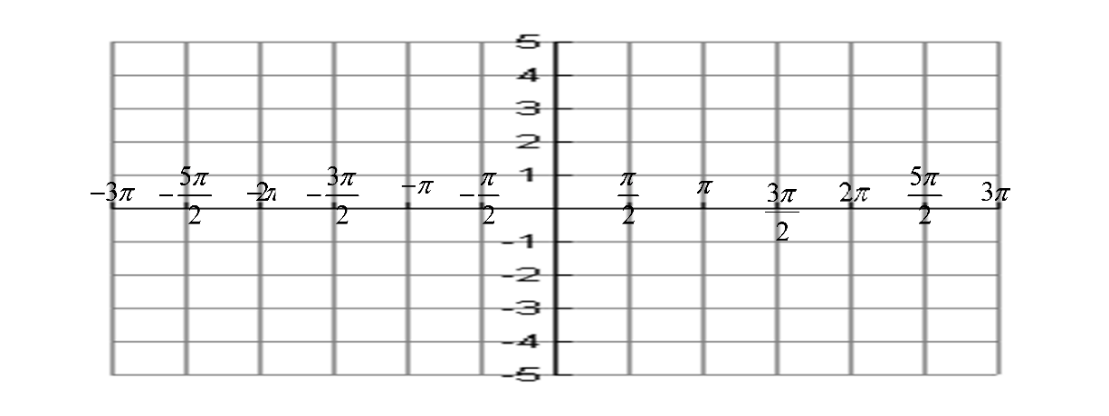


PERIOD AND PHASE SHIFTS

Graph the following functions. State the period, amplitude, phase shift and vertical shift if any.

1. 2. 3.

4. 5. 6.

7. 8.

