Introduction to the Sine and Cosine Curve

The Sine Curve

1. Complete the table of values and graph the function y = sinθ.



|  |  |
| --- | --- |
| θ | y = sinθ |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |

The Cosine Curve

1. Complete the table of values and graph the function y = cosθ.

|  |  |
| --- | --- |
| θ | y = cosθ |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |

**Follow-Up**

1. What do both the sine curve and cosine curve have in common?
2. What is different about the sine curve and the cosine curve?

# Homework: Complete graphs below + Pg. 363 #2, 7, 9, 10, (11ab)

For each equation, complete the table of values and graph the function.

a) y = sinθ + 2

|  |  |
| --- | --- |
| θ | y = sinθ + 2 |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |



b) y = sin(θ - 60o)

|  |  |
| --- | --- |
| θ | y = sin(θ - 60o) |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |



c) y = 2sinθ



|  |  |
| --- | --- |
| θ | y = 2sinθ |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |

d) y = sin3θ

|  |  |
| --- | --- |
| θ | y = sin3θ |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |



e) y = 2sinθ -1



|  |  |
| --- | --- |
| θ | y = 2sinθ -1 |
| 0o |  |
| 30o |  |
| 60o |  |
| 90o |  |
| 120o |  |
| 150o |  |
| 180o |  |
| 210o |  |
| 240o |  |
| 270o |  |
| 300o |  |
| 330o |  |
| 360o |  |

**90o**

**0**

**180o**

**270o**

**360o**

**450o**

**-90o**

**1**

**2**

**3**

**4**

**-1**

**-2**

**-3**

**-4**

**θ**

**y**