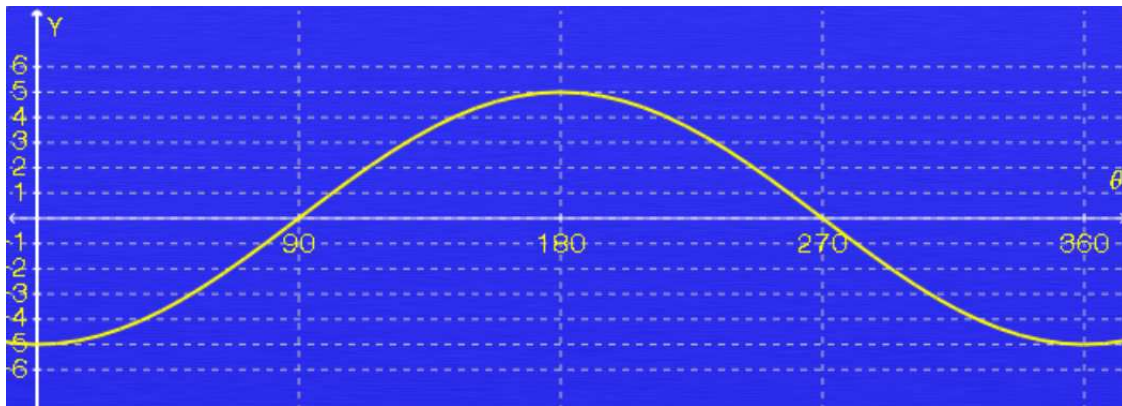| GRADE 11_Trigonometric graphs |
|---|
| 11.9   Trigonometric graphs |

1.   Draw the following graphs.

1.1 $y = \cos 2x$, $x \in [0°;360°]$

1.2 $y = \sin 4x$, $x \in [-360°;360°]$

1.3 $y = \sin \dfrac{1}{2}x$, $x \in [0°;360°]$

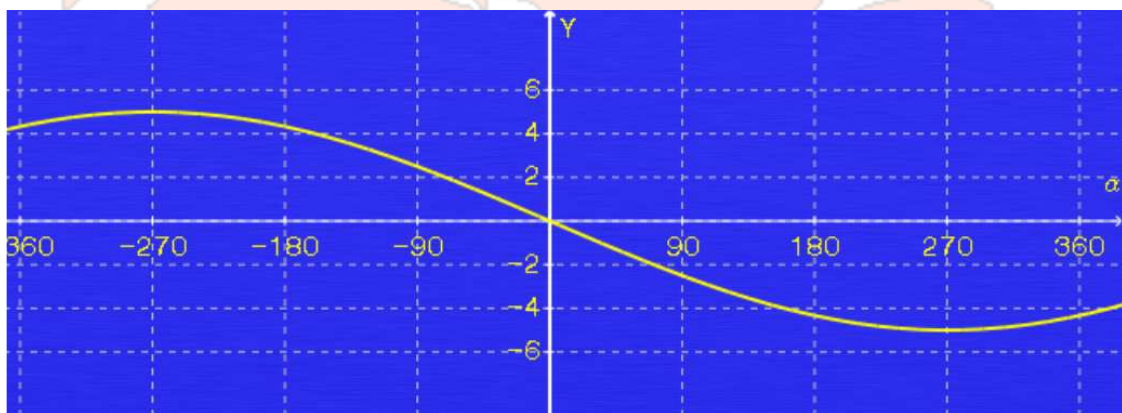2.   Use the graph to answer the questions.

2.1   If the graphs represents $y = b\cos a\theta$, determine the values for a and b.
2.2   What is the period for the given graph?
2.3   What is the amplitude for the given graph?

3.   Use the graph to answer the questions.

3.1   If the graph represents $y = a \sin b\alpha$, find the values of a and b.
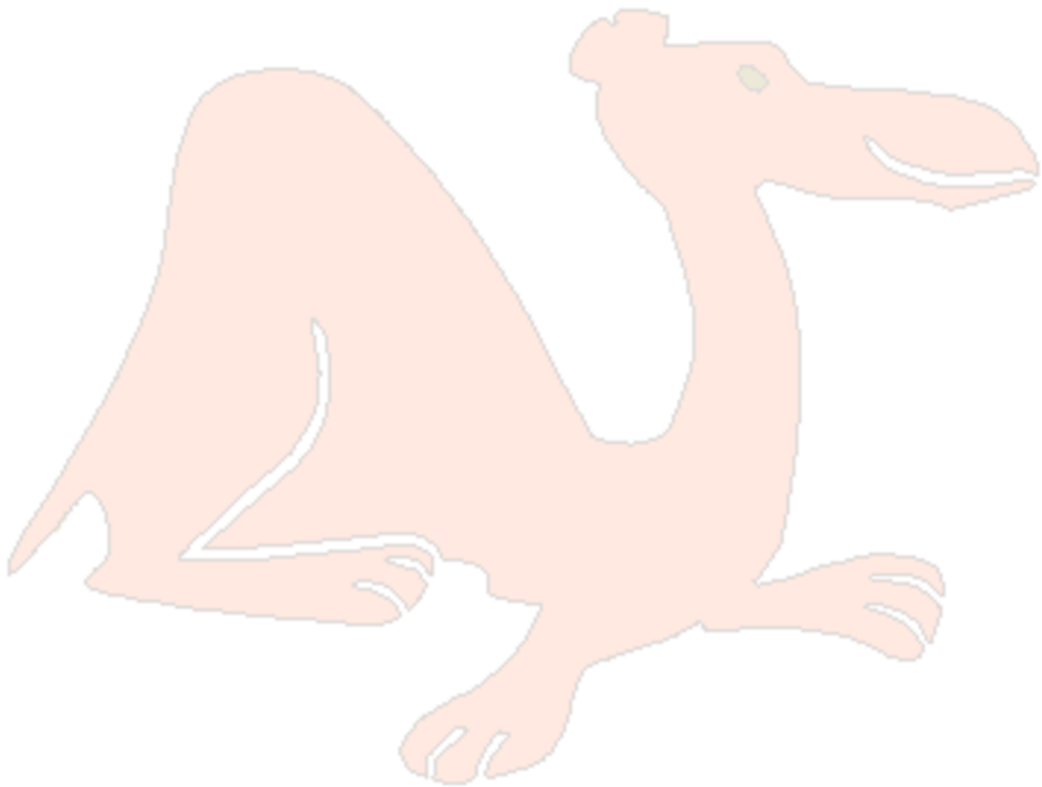
3.2   Write down the period of the graph.
3.3   Write down the maximum value for the graph.

4.   Answer the following questions.

4.1   If y = -2 sin 3β -1, for $\beta \in$ [360°;l360°], write down the minimum and maximum values for the graph.

4.2   If y = -3 cos 3α + 3, for $\alpha \in$ [0°;360°], determine the period for the graph.

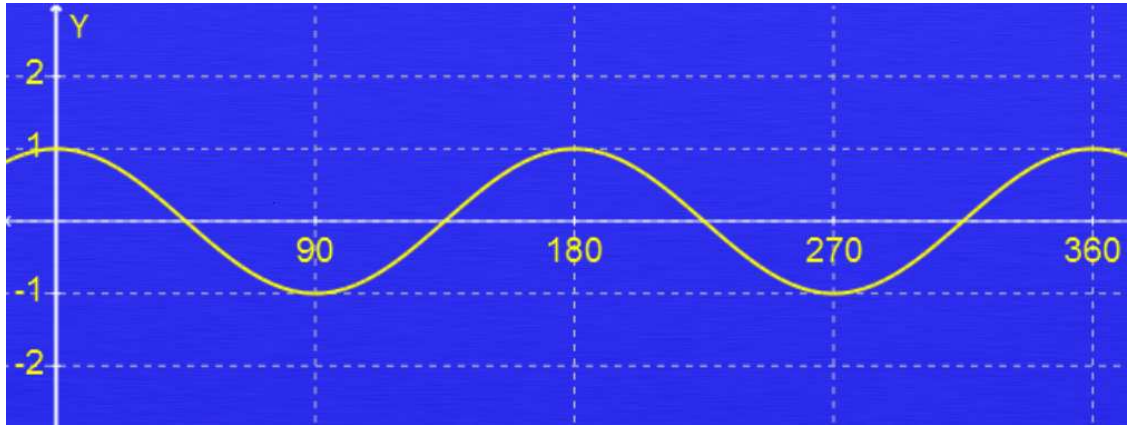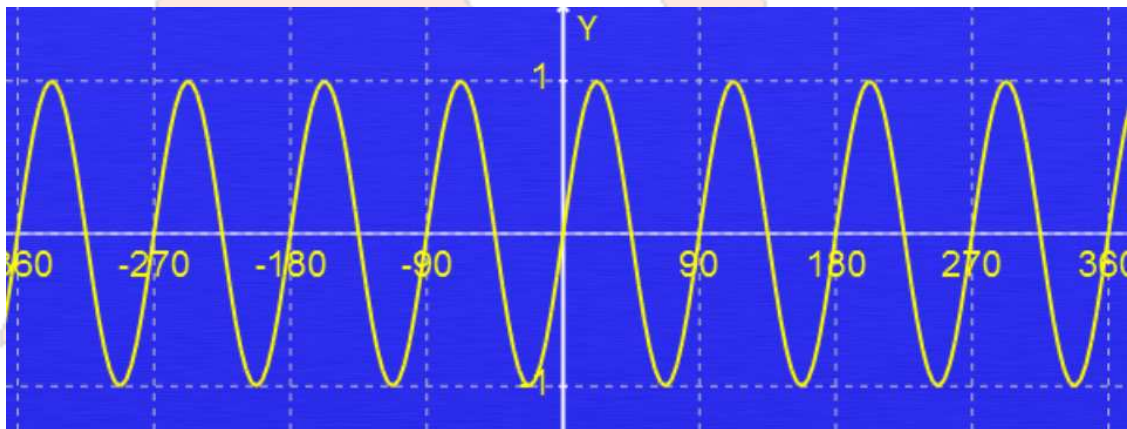4.3   Write down the range for y = -2 tan 3α + 1 if $\alpha \in$ [-360°;360°].

MEMO

1. Draw the following graphs. [WCTrig83A ; WCTrig83B]

1.1
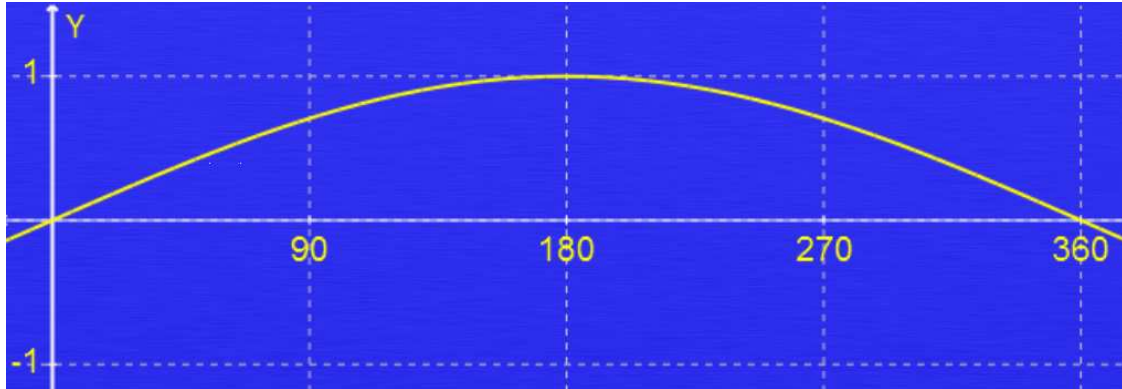

1.2

1.3

2. Use the graph to answer the questions. [7.8.2.5]

2.1 $a = 1$ and $b = -5$
2.2 360°
2.3 5

3. Use the graph to answer the questions. [7.8.2.6]

3.1 $a = -5$ and $b = \dfrac{1}{3}$

3.2 1080°
3.3 5

4. Answer the following questions. [7.8.2.8]

4.1 Minimum = -3
    Maximum = 1

4.2 Period = 120°

4.3 Range is (-∞;∞)