**Exact Value Trigonometry GREEN**

1. Find the exact values of:

a) $\sin(30°)$ \_\_\_\_ b) $\tan(45°)$ \_\_\_\_ c) $\sin(150°)$ \_\_\_\_

d) $\sin(330°) $ \_\_\_\_ e) $\cos(90°)$ \_\_\_\_ f) $\sin(-90°)$ \_\_\_\_

2. If $\sin(θ)=\frac{1}{2}$ , find the values of:

a) $\cos(θ)$ \_\_\_\_ b) $\tan(θ)$ \_\_\_\_

3. Find the value of $\sin(θ)$ when $\tan(θ)=1$ \_\_\_\_

4. For the triangle shown opposite, calculate:

a) the area of this triangle \_\_\_\_ m²

b) the exact length of the third side, $x$ \_\_\_\_ m

5. Arrange the following in order of size starting with the smallest:

$\sin(10°)$ $\sin(90°)$ $\sin(135°)$ $\sin(270°)$

 Justify your answer.

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**Exact Value Trigonometry AMBER**

Remember the graphs are periodic and symmetrical (excluding tangent!)

1. Find the exact values of:

a) $\sin(30°)$ \_\_\_\_ b) $\tan(45°)$ \_\_\_\_ c) $\sin(150°)$ \_\_\_\_

d) $\sin(330°) $ \_\_\_\_ e) $\cos(90°)$ \_\_\_\_ f) $\sin(-90°)$ \_\_\_\_

2. If $\sin(θ)=\frac{1}{2}$ , find the values of:

Use your table!

a) $\cos(θ)$ \_\_\_\_ b) $\tan(θ)$ \_\_\_\_

3. Find the value of $\sin(θ)$ when $\tan(θ)=1$ \_\_\_\_

4. For the triangle shown opposite, calculate:

a) the area of this triangle \_\_\_\_ m²

Area $=\frac{1}{2}ab\sin(C)$

b) the exact length of the third side, $x$ \_\_\_\_ m

$a^{2}=b^{2}+c^{2}-2bc\cos(A)$

5. Arrange the following in order of size starting with the smallest:

$\sin(10°)$ $\sin(90°)$ $\sin(135°)$ $\sin(270°)$

 Justify your answer.

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4. For the triangle shown opposite, calculate:

a) the **exact** area of this triangle \_\_\_\_ m²

Area $=\frac{1}{2}ab\sin(C)$

 Area $=\frac{1}{2}×4×6×\sin(60)$

 $=$

b) the **exact** length of the third side, $x$ \_\_\_\_ m

$a^{2}=b^{2}+c^{2}-2bc\cos(A)$

 $x^{2}=4^{2}+6^{2}-2×4×6×\cos(60)$

 $=$

5. Arrange the following in order of size starting with the smallest:

Remember the graphs are periodic and symmetrical (excluding tangent!) and use your table.

$\sin(10°)$ $\sin(90°)$ $\sin(135°)$ $\sin(270°)$

 Justify your answer.

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