## Trigonometry Worksheet 5 - Answers

Use the following information for questions 1-6. Angles $\alpha$ and $\beta$ are the two acute angles in a right triangle.

1. How are $\sin \alpha$ and $\cos \beta$ related?

They are equal.
2. How are $\tan \alpha$ and $\cot \beta$ related?

They are equal.
3. How are $\sec \alpha$ and $\csc \beta$ related?

They are equal.
6. Simplify $\frac{\sin \alpha}{\sin \beta} \times \frac{\cos \beta}{\cos \alpha}$.
$\tan \alpha$
7. Simplify $\frac{\cos ^{4} \alpha-\sin ^{4} \alpha}{2 \cos ^{2} \alpha-1}$

1
8. Simplify (but do not solve) $\sin 72^{c}$ irc + $\cos 18^{\circ}$.
$2 \sin 72^{\circ}$.
4. Simplify $\frac{\sin \alpha+\cos \beta}{\cos \alpha}$.
$2 \tan \alpha$
9. Simplify $\frac{\tan 20^{\circ}+\cot 70^{\circ}}{\tan 20^{\circ}}$. 2
5. Simplify $\frac{\cos \alpha}{\cos \alpha+\cos \beta}$.
10. Find $m$ if $\sin (18 m-12)=\cos (7 m+2)$.

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m=4
$$

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