

Note: $\tan^2(A) = (\tan(A))^2$

Finding Exact Value of Trig Expressions using Special Right Triangles:

1) $\sin(30^\circ)\cos(45^\circ)$	2) $\tan^2(60^\circ)$	3) $\sin^2(30^\circ) + \cos^2(30^\circ)$
4) $4\sin(60^\circ) + 2\tan(60^\circ)$	5) $\cos^2(30^\circ) + \sin^2(60^\circ)$	6) $\tan^2(45^\circ) + \sin^2(45^\circ)$

Finding the Area and Perimeter of each figure.

<p>7)</p>	<p>8)</p>	<p>9) Find the area of a regular pentagon with a radius of 8 cm.</p>
<p>10) Find the area of a regular hexagon with a radius of 10 cm.</p>	<p>11) Find the area of a regular decagon with an apothem of 4 cm.</p>	<p>12) Find the area of an equilateral triangle with a radius of 12 cm.</p>

Word Problems:

<p>13) The angle of depression from the top of building to a person on the ground is 35°. If the building is 50 feet tall, how far from the base of the building is the person?</p>	<p>14) A ramp is sloped so that it has a horizontal length of 8 feet and vertical length of 5 feet. What is the angle of elevation of the ramp?</p>	<p>15) A kite staked to the ground with an angle of elevation of 50°. If the string is 62 feet long, how high above the ground is the kite?</p>
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You are required to choose one of the following.

Option 1: Practice the Basics:

Finding missing sides or angles on right triangles. Be sure to show the equation you used to find the answer. Round side lengths to the nearest hundredth and angles to the nearest tenth.

<p>16)</p>	<p>17)</p>	<p>18)</p>
<p>19)</p>	<p>20)</p>	<p>21)</p>

Option 2: Learn a new Concept:

Solving Trig Equations: Solve each equation for A. Copy the problem and show all steps.

<p>Examples:</p> $3 + 7\cos(A) = 8$ $7\cos(A) = 5$ $\cos(A) = \frac{5}{7}$ $A = \cos^{-1}(\frac{5}{7}) = 44.4^\circ$	$3\sin(2A) = 1$ $\sin(2A) = \frac{1}{3}$ $2A = \sin^{-1}(\frac{1}{3})$ $2A = 19.471$ $A = 9.7^\circ$	<p>22) $3 + 5\sin(A) = 4$</p>	<p>23) $-2 + 8\cos(A) = 1$</p>
		<p>24) $\tan(2A) = 1.85$</p>	<p>25) $3\sin(2A - 10) = 2$</p>
		<p>26) $2 + 5\tan(A) = 8$</p>	<p>27) $2 + 10\cos(A + 12) = 13$</p>