

RADICALS – 3. Solve & Rationalize

Name:

Date:

Please remember to show/communicate all your work. You DO NOT need to answer every question, two correct answers at any level will demonstrate a student's level of attainment.

LEGEND						
✓	M	x	S	N	G	H
correct	mostly correct	incorrect	silly mistake	did not know how to start or skipped	with group	got help

	Mild (🌶️🌶️)		Medium (🌶️🌶️🌶️)		Spicy (🌶️🌶️🌶️🌶️)
Questions	#1	#2	#3	#4	#5
Results					

Provide all answers in rationalized form when possible.

1. Simplify the following expressions.

a) $\frac{\sqrt{5}}{\sqrt{3x^2}}$

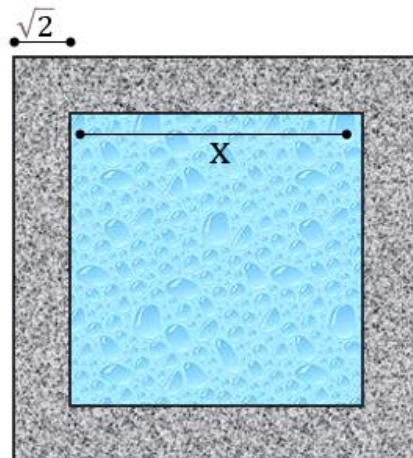
b) $\frac{4\sqrt{b}}{\sqrt{3}-b}$

RADICALS – 3. Solve & Rationalize

2. Simplify the following into both a radical form **and** an exponential form.

$$\frac{3\sqrt{a^2}}{\sqrt{3}} \div (2a^{\frac{3}{2}})$$

3. A walkway with an area of 32m^2 is $\sqrt{2}$ meters wide and goes around a square pool. Determine the length of the pool (x).

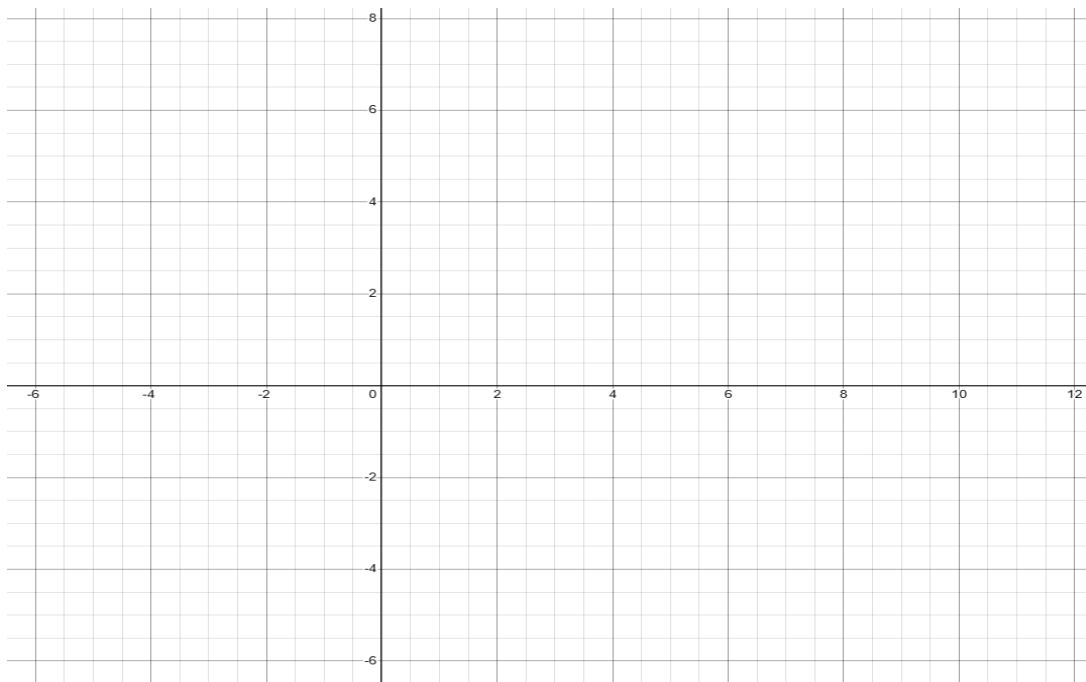


RADICALS – 3. Solve & Rationalize

4. Solve for x algebraically & check for any extraneous roots by completing a rough graph (consider using the t-chart to get you started).

$$1.5\sqrt{x+6} = 3\left(\frac{x}{4} - \frac{1}{2}\right)$$

x	$1.5\sqrt{x+6}$	$3\left(\frac{x}{4} - \frac{1}{2}\right)$
-6		
-5		
0		



RADICALS – 3. Solve & Rationalize

5. Solve for possible x values & determine the overall length & width by checking for extraneous roots (recall Pythagorean theorem).

