

#1 Simplify.  $\sqrt{8/5}$  Be sure to write you answer in lowest terms

Answer  $\frac{2}{5}$

#2 rewrite the following in simplified radical form.  $\sqrt{8w^{10}}$  assume that all variables represent positive real numbers.

Answer:  $2w^5\sqrt{2}$

#3 Simplify as much as possible.  $3w\sqrt{75x^3} + x\sqrt{48xw^2}$  assume that all variables represent positive real numbers

$19xw\sqrt{3x}$   $19xw\sqrt{3x}$

#4 simplify  $\sqrt{2w^7}u\sqrt{10w^2}u^8$  assume that all variables represent positive real numbers

Answer  $2u^4w^4\sqrt{5uw}$

#5 rationalize the denominator and simplify  $\sqrt{3}/\sqrt{13}$

Answer:  $\frac{\sqrt{39}}{13}$

#6 solve for v, where v is a real number  $\sqrt{v+13}=3$  (if there is more than one solution, separate them with commas.)

Answer: -4

#7 solve for w, where w is a real number  $\sqrt{-7w+8}=w$  (if there is more than one solution, separate them with commas)

Answer: 1

#8 For the following right triangle, find the side length x. Round you answer to the nearest tenth. the vertical line of the triangle is 10 the horizontal line of the triangle is 12 the diagonal line is x

Answer: 15.6

#9 simplify  $8^{2/3}$

Answer: 4

#10 solve for u.  $5u^2 - 6 = 7u$  (if there is more than one solution, separate them with commas.)

Answer:  $-\frac{3}{5}, 2$

#11 compute the value of the discriminant and give the number of real solutions to the quadratic equation.  $9x^2 - 6x + 1 = 0$

Discriminant = 0, 1 real solution

#12 use the quadratic formula to solve for x.  $8x^2 - x - 3 = 0$  (if there is more than one solution, separate them with commas)

Answer:  $\frac{1+\sqrt{97}}{16}, \frac{1-\sqrt{97}}{16}$