Name: Key

10.2 Homework

For 1-12 simplify the expression. (Leave in radical form. No Decimals!!!)

1) $\sqrt{250}$

$25 \cdot 10$

$5\sqrt{10}$

2) $\sqrt{44}$

$4 \cdot 11$

$2\sqrt{11}$

3) $\frac{\sqrt{20}}{\sqrt{5}}$

$\sqrt{\frac{20}{5}}$

$\sqrt{4}$

2

4) $\sqrt{\frac{6}{2}}$

$\sqrt{3}$

5) $\sqrt{4} \cdot 3\sqrt{2}$

$3\sqrt{8}$

$3(2\sqrt{2})$

$6\sqrt{2}$

6) $6\sqrt{8} \cdot 7\sqrt{2}$

$42\sqrt{16}$

$42(4)$

168

7) $\sqrt{\frac{20}{4}}$

$\sqrt{5}$

8) $\frac{\sqrt{120}}{\sqrt{4}}$

$\sqrt{30}$

9) $\frac{1}{2}\sqrt{112}$

$16 \cdot 7$

$\frac{1}{2}(4\sqrt{7})$

$2\sqrt{7}$

10) $\sqrt{\frac{11}{16}}$

$\frac{\sqrt{11}}{\sqrt{16}}$

$\frac{\sqrt{11}}{4}$

11) $\pm\frac{\sqrt{25}}{\sqrt{100}}$

$\pm\frac{1}{2}$

12) $\frac{2}{3}\sqrt{98}$

$2 \cdot 49$

$\frac{2}{3}(7\sqrt{2})$

$\frac{14}{3}\sqrt{2}$

13) $\sqrt{24a^2}$

$2a\sqrt{6}$

14) $\frac{\sqrt{8}}{\sqrt{24}}$

$\sqrt{\frac{8}{24}}$

$\sqrt{\frac{1}{3}}$

$\frac{\sqrt{3}}{\sqrt{3}} \cdot \frac{1}{\sqrt{3}}$

$\frac{\sqrt{3}}{3}$

15) $\frac{8\sqrt{2}}{2\sqrt{8}}$

$4\sqrt{\frac{1}{4}}$

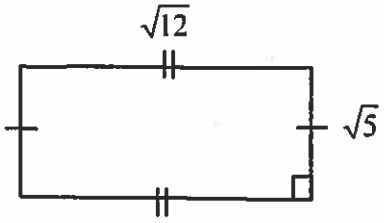
$4\left(\frac{1}{2}\right)$

2

16) $\sqrt{\frac{75b^2c^8}{a^2}}$

$\frac{5bc^4\sqrt{3}}{a}$

17) Find the area of the figure. Give both the exact answer in simplified form and the decimal approximation rounded to the nearest hundredth. Which answer is more accurate and why? Which is more functional?



$\sqrt{60}$

$2\sqrt{15}$ ≈ 7.75