Grab a Week #2 Packet
Bell Ringer

Monday 11/25

Solve the equations using square roots:

$x^2 - 55 = 26$

$+55 \quad +55$

$\sqrt{x^2} = \sqrt{81}$

$x = \pm 9$

$\sqrt{(x-1)^2} = \sqrt{4}$

$x - 1 = \pm 2$

$x - 1 = 2 \qquad x - 1 = -2$

$+1 \quad +1 \qquad +1 \quad +1$

$x = 3 \qquad x = -1$

$5x^2 + 2 = 6$

$-2 \quad -2$

$\frac{5x^2}{5} = \frac{4}{5}$

$\sqrt{x^2} = \sqrt{\frac{4}{5}}$

$x = \pm\sqrt{\frac{4}{5}}$

$x = \pm\frac{\sqrt{4}}{\sqrt{5}} = \pm\frac{2}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}}$

$= \frac{\pm 2\sqrt{5}}{5}$

4.2 online hw due today

4.3 online hw due tomorrow

Week #1 Packet is due tomorrow!

$\sqrt{\frac{12}{54}} = \sqrt{\frac{2}{9}}$

$\frac{\sqrt{2}}{\sqrt{9}} = \frac{\sqrt{2}}{3}$

$\sqrt{\frac{48}{3}} = \sqrt{16} = 4$

$\sqrt{\frac{18}{126}} = \sqrt{\frac{1}{7}}$

$= \frac{\sqrt{1}}{\sqrt{7}} = \frac{1}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}}$

$= \frac{\sqrt{7}}{7}$

due Monday

Name: _____ Hour: _____ **Simplifying Radicals ws**

Simplify the radicals and write your answers in EXACT form.

1. $2\sqrt{27}$
2. $\sqrt{12}$
3. $3\sqrt{8}$
4. $5\sqrt{44}$
5. $2\sqrt{36a^4b}$
6. $\sqrt[3]{8x^3y^2}$

$11 \cdot 4$, $2 \cdot 2$, $2 \cdot 5\sqrt{11} = 10\sqrt{11}$

7. $\sqrt{a^3b^4}$
8. $2\sqrt[3]{27x^5y^6z^{10}}$
9. $\sqrt[4]{32x^5y^{11}}$

$2 \cdot 2 \cdot 2 \cdot y\,y\,x$, $3 \cdot 3$, $x\,x\,x\,x\,x$, $y\,y\,y\,y\,y$, $2\,2\,2\,2\,2\,2\,2\,2\,2\,2$, $3\sqrt{x^2z}$, $6xy^2z^3\sqrt{x^2z}$

10. $\sqrt{\frac{49}{y^2}}$
11. $\sqrt{\frac{25y^3}{x^4}}$
12. $\frac{3}{\sqrt{6}}$

$= \frac{\sqrt{49}}{\sqrt{y^2}}$, $\frac{7}{y}$

13. $\frac{6+\sqrt{45}}{3}$
14. $\frac{10+\sqrt{50}}{5}$
15. $\frac{6+\sqrt{12}}{2}$

$= \frac{6}{2} + \frac{\sqrt{12}}{2}$, $\sqrt{2}\sqrt{3}$, $\frac{6}{2} + \frac{2\sqrt{3}}{2}$, $3+\sqrt{3}$

16. $2\sqrt{50ab^5}$
17. $-\sqrt{49x^2}$
18. $\sqrt{80x^3}$

19. True or False.

a. $\frac{\sqrt{15}}{3} = \sqrt{3}$	b. $\sqrt[3]{9} = 3$
c. $\sqrt[6]{16} = \sqrt[3]{4}$	d. $\frac{2+\sqrt{6}}{2} = 1 + \sqrt{6}$
e. $\sqrt{4} = \sqrt{2}$	*f*. $\sqrt{12} = 2\sqrt{6}$
g. $\sqrt[3]{-27} = -3$	h. $\sqrt{-25} = -5$
i. $\sqrt{283} = 17$	j. $\sqrt{18} = 9\sqrt{2}$
k. $\frac{6}{\sqrt{5}} = \frac{\sqrt{30}}{5}$	l. $\frac{8}{\sqrt{2}} = 4\sqrt{2}$

Simplify.

20. $5\sqrt{7} + \sqrt{7}$

21. $\sqrt{3} + \sqrt{27}$

22. $2\sqrt{3} - 4\sqrt{18}$

23. $\sqrt{2}(\sqrt{8})$

24. $3\sqrt{2}(-1\sqrt{5} + 3\sqrt{20})$

$-3\sqrt{10} + 9\sqrt{40}$

$\times 10$

$-3\sqrt{10} + 18\sqrt{10} = 15\sqrt{10}$

25. $2\sqrt{2}(\sqrt{5} + 9\sqrt{2})$