

More w/
Radicals

Warm-Up Problems
Do These NOW Before Class!!!!

ex1) $\frac{1}{6} \sqrt{25}$	ex3) $\frac{3}{5} \sqrt{300}$
ex2) $\frac{1}{20} \sqrt{75}$	

- Py 508, 509, 515
- | | | |
|--------------------------|--------------------------|------------------------------|
| (18) ± 3 | (32) No Sol ⁿ | (53) \pm |
| (20) $\pm \sqrt{17}$ | (34) ± 10 | (54) \pm |
| (22) $\pm \sqrt{15}$ | (36) $\pm \sqrt{5}$ | (55) \pm |
| (24) No Sol ⁿ | (38) ± 8 | (48) $\frac{\sqrt{30}}{6}$ |
| (26) $\pm \sqrt{39}$ | (40) ± 4 | (52) $\frac{\sqrt{15}}{7}$ |
| (28) 0 | (42) No Sol ⁿ | (56) $\frac{\sqrt{6}}{2}$ |
| (30) ± 20 | (50) \pm | (60) 90 |
| | (51) \pm | (64) $6\sqrt{11}$ |
| | (52) \pm | (68) $\frac{\sqrt{14}}{4}$ |
| | | (72) $\frac{-2\sqrt{10}}{5}$ |

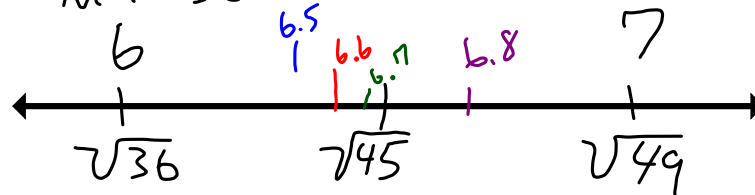
$$\begin{aligned}
 \text{ex1} \quad & \frac{1}{6} \sqrt{12} \\
 &= \frac{1}{6} \sqrt{4} \cdot \sqrt{3} \\
 &= \frac{1}{\cancel{6}^2} \cdot \cancel{2} \cdot \sqrt{3} \\
 &= \frac{1}{2} \sqrt{3}
 \end{aligned}$$

$$\begin{aligned}
 \text{ex2} \quad & \frac{1}{20} \sqrt{75} \\
 &= \frac{1}{20} \sqrt{25} \cdot \sqrt{3} \\
 &= \frac{1}{\cancel{20}^4} \cdot \cancel{5} \sqrt{3} = \underline{\underline{\frac{1}{4} \sqrt{3}}}
 \end{aligned}$$

$$\begin{aligned}
 \text{ex3} \quad & \frac{3}{5} \sqrt{300} \\
 &= \frac{3}{5} \sqrt{100} \cdot \sqrt{3} \\
 &= \frac{3}{\cancel{5}^2} \cdot \cancel{10}^2 \sqrt{3} \\
 &= \underline{\underline{6 \sqrt{3}}}
 \end{aligned}$$

Not in
the Book

Approx $\sqrt{45}$ to the
Nearest tenth.



Guess 6.6.

$$\begin{array}{r} 6.6 \\ \times 6.6 \\ \hline 396 \\ 3960 \\ \hline 43.56 \end{array}$$

1.44
away

Now Guess 6.7

$$\begin{array}{r} 6.7 \\ \times 6.7 \\ \hline 469 \\ 4020 \\ \hline 44.89 \end{array}$$

.11
away

Now Guess 6.8

$$\begin{array}{r} 6.8 \\ \times 6.8 \\ \hline 544 \\ 4080 \\ \hline 46.24 \end{array}$$

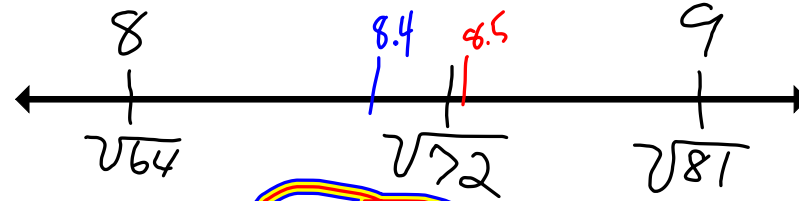
1.24
away

So...

$$\underline{\underline{\sqrt{45} \approx 6.7}}$$

to the Nearest 10^{th}

$$\sqrt{72}$$



Guess 8.4

$$\begin{array}{r} 8.4 \\ \times 8.4 \\ \hline 336 \\ 6720 \\ \hline 7056 \end{array}$$

1.44
away

Guess 8.5

$$\begin{array}{r} 8.5 \\ \times 8.5 \\ \hline 425 \\ 6800 \\ \hline 7225 \end{array}$$

.25
away

So...

$$\underline{\underline{\sqrt{72} \approx 8.5}}$$

O.T.L.

Approx to the Nearest 10^4

① $\sqrt{95}$

② $\sqrt{130}$

③ $\sqrt{60}$