 Get a whiteboard, marker, and eraser, desk for later! 1) Write down as many perfect cube num 2) Find each square root:	. Keep them in your bers as you know.
 Write down as many <u>perfect cube</u> num Find each square root: √9 √9	bers as you know.
 Find each square root: ^{√9} ^{√9} ⁵⁰²² 	
$\sqrt{900} \sqrt{64} \sqrt{6400} \sqrt{25} \sqrt{250}$	

p.75 (1-	, 10, 16, 18 – 23)
p.75 1) 4 2) -22 3) undefined 4) $\frac{3}{7}$ and - 10) 12 16) 20 ft 18) 36 19) $\frac{25}{81}$	20) 199 21) x 22) The square of any square root is the same as the original number. 23) No number times itself can equal a negative. But -2 times -2 times -2 is -8, so $\sqrt[3]{-8} = -2$. UST have work shown for and 16***







More patterns – Perfect Squares				
		Look at all of the ones digits		
$1^2 = 1$	$11^2 = 121$	Do you notice anything?		
$2^2 = 4$	$12^2 = 144$	bo you nonce anyming.		
$3^2 = 9$	$13^2 = 169$	E 1 1 404		
$4^2 = 16$	$14^2 = 196$	Find $\sqrt{484}$.		
$5^2 = 25$	$15^2 = 225$	Based on this nattern the square		
$6^2 = 36$	$16^2 = 256$	root MUST end in 2 or 8.		
$7^2 = 49$	$17^{2}_{2} = 289$			
$8^2 = 64$	$18^2_2 = 324$	(That is, unless it's not a		
$9^2 = 81$	$19\frac{2}{2} = 361$	perfect square in the first		
$10^2 = 100$	$20^2 = 400$	place. For example, $\sqrt{14}$		

More patterns – Perfect Cubes			
$1^3 = 1$ $2^3 = 8$ $3^3 = 27$ $4^3 = 64$	Any guesses for $\sqrt[3]{2197}$?		
$4^{3} = 64$ $5^{3} = 125$ $6^{3} = 216$ $5^{3} = 242$	Any guesses for $\sqrt[3]{17576}$?		
$7^{3} = 343$ $8^{3} = 512$ $9^{3} = 729$ $10^{3} = 1000$	Estimate for $\sqrt[3]{480}$?		

RECIMAL CHALLENGE

ESTIMATING SQUARE ROOTS

ESTIMATING ROOTS

Based on your knowledge of the perfect squares, you should be able to estimate square roots of nonperfect squares pretty accurately.

 $\sqrt{17}$ ≈ 4.12













√215 ≈ 14.66

√139 ≈ 11.79

³√10 ≈ 2.15 ³√70 ≈ 4.12

³√124 ≈ 4.99

Making our estimates more exact

- How can you CHECK an estimate?
- To check an estimate, multiply it back out to see how close it is!
- **□** √52
- □ $7.3 \cdot 7.3 = 53.29$ (too high) □ $7.2 \cdot 7.2 = 51.84$ (too low)
- 7.2 was closer , so 7.2 is the best estimate to the nearest tenth.







QUIZ TOMORROW

□ If I give homework the day before a quiz, I will <u>always</u> <u>upload an ANSWER KEY to my website</u>.

Here's what you should do:

- Do the homework like normal, without looking at the key.
- Then, go on my website, and check your answers. Fix any mistakes in a different color. Use the answer key to study!
- 3. If you missed a problem, but corrected it using my answer key, you will be able to count it as <u>correct</u> when we officially check it in class the next day. (As long as I can tell you corrected it with a different color)

