DLT Make-up Procedure:

1) Print out DLT sheet

2) Check to make sure you have NO missing HW assignments

3) Check test and make sure you got ALL corresponding

   questions on the test correct

4) Highlight the DLT's you missed points AND got correct on test

5) MAKE TEST CORRECTIONS

6) Paperclip test and DLT sheet together and turn in no later
than 2 weeks after the tests are handed back (2/18, 2/19)

Date	DLT Score	DLT	Test Title	Test Question (s)
		Name:_____		Hour:_____
21-Jan		Unit 8 DLT 1: 6.1, 6.3, 6.4	Unit 8 Quest	#2-4, 12,15
27-Jan		Unit 8 DLT 2: Points of Concurrency (6.1-6.4)	Unit 8 Quest	#16, 24
29-Jan		Unit 8 DLT 3: 6.1	Unit 8 Quest	#9-11, 22, 23

Steps to earn DLT points back:

1) 90% HW completion on the unit

2) Get the targets correct on the test

**this means you correctly anser ALL of the questions listed!

3) Make a list for Ms. Wilmert including

  A) Print this page out

  B) Highlight the DLTs you missed points AND got correct on the test

4) **MAKE TEST CORRECTIONS ON ENTIRE TEST!**

5) Paperclip test and this sheet and turn into Ms. Wilmert with your name and hour

Today is Day 1 of Unit 9:
Right Triangles

Assessments:
Right Triangles Quiz
Tuesday 2/18 Wednesday 2/19

Evaluate

$1^2 =$ 1

$2^2 =$ 4

$3^2 =$ 9

$4^2 =$ 16

$5^2 =$ 25

$6^2 =$ 36

$7^2 =$ 49

$8^2 =$ 64

$9^2 =$ 81

$10^2 =$ 100

$11^2 =$ 121

$12^2 =$ 144

$13^2 =$ 169

$14^2 =$ 196

$15^2 =$ 225

$16^2 =$ 256

$17^2 =$ 289

$18^2 =$ 324

$19^2 =$ 361

$20^2 =$ 400

Unit 9: Right Triangles
"Rad"icals

Today's I Can Statement:

    TR-1: I can simplify radicals
    TR-2: I can perform mathematical
          operations with a radical

Simplifying Radicals

$$\sqrt{a}^{\text{radical symbol}}_{\text{radicand}}$$

$$\sqrt{a \bullet b} = \sqrt{a} \bullet \sqrt{b}$$ Product Property

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$ Quotient Property

Simpliest Form-apply properties
-remove any perfect squares
-rationalize any denominators

Simplifying Radicals:

Determine nice perfect square multiples

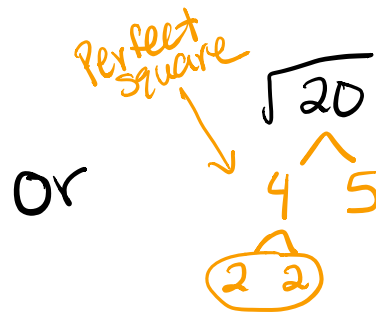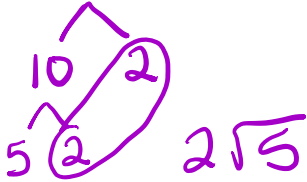EX: $\sqrt{18}$

Perfect square $\rightarrow$ 9   2

3   3

$3\sqrt{2}$

Example

Simplify.

a. $\sqrt{20}$

10   2

5   2 $2\sqrt{5}$

Or

Perfect square

$\sqrt{20}$

4   5

2   2

b. $\sqrt{48}$

6   8

3   2   2

4

2   2

$2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}$

Example

Simplify.

a. $2\sqrt{96}$

12　8

3　4　4　2

2 2　2 2

$2 \cdot 2\sqrt{3}\sqrt{2} = 4\sqrt{6}$

b. $\dfrac{1}{3}\sqrt{90}$

9　10

3 3　2 5

$\dfrac{1}{3} \cdot 3 \cdot \sqrt{10} = \sqrt{10}$

Example

Simplify.

a. $\sqrt{24} \cdot 2\sqrt{3}$

$$4 \overset{\wedge}{6}$$
$$\overset{\wedge}{(2\ 2)}\ \overset{\wedge}{2\ 3}$$
$$2\sqrt{6}$$

$$2\sqrt{6} \cdot 2\sqrt{3} = 4\sqrt{18} = 4 \cdot 3\sqrt{2}$$
$$9 \overset{\wedge}{2}$$
$$(3\ 3)$$
$$3\sqrt{2}$$
$$= \boxed{12\sqrt{2}}$$

b. $3\sqrt{2} \cdot 5\sqrt{20}$

$$2 \overset{\wedge}{10}$$
$$(2\ \overset{\wedge}{5})$$
$$2\sqrt{5}$$

$$3\sqrt{2} \cdot 5 \cdot 2\sqrt{5} = 3\sqrt{2} \cdot 10\sqrt{5} = \boxed{30\sqrt{10}}$$

<u>Squaring:</u> Expand.   Example

$$\left(\sqrt{5}\right)^2 \qquad \sqrt{5} \cdot \sqrt{5} = 5$$

Simplify.

a. $\left(4\sqrt{13}\right)^2$

$16 \cdot 13$

208

b. $\left(5\sqrt{11}\right)^2$

$25 \cdot 11$

275

Example

What do we do when a $\sqrt{}$ is in the denominator?

Simplify.

a. $\sqrt{\dfrac{16}{9}} = \dfrac{\sqrt{16}}{\sqrt{9}} = \dfrac{4}{3}$

↑
Perfect squares!

b. $\dfrac{\sqrt{24}}{\sqrt{6}} \cdot \dfrac{\sqrt{6}}{\sqrt{6}}$

$\dfrac{\sqrt{144}}{6}$

$\dfrac{12}{6} = \boxed{2}$

Example

Rationalize the denominator.

a. $\dfrac{10}{\sqrt{5}} \cdot \dfrac{\sqrt{5}}{\sqrt{5}}$

$\dfrac{10\sqrt{5}}{5}$

$= \boxed{2\sqrt{5}}$

b. $\dfrac{7}{\sqrt{8}} \cdot \dfrac{\sqrt{8}}{\sqrt{8}}$

$\dfrac{7\sqrt{8}}{8}$

$\sqrt{8}$ ↗

$2\underset{\displaystyle \overset{\frown}{\textcircled{2\,2}}}{4}$

$2\sqrt{2}$

$\dfrac{7 \cdot 2\sqrt{2}}{8}$

$\dfrac{14\sqrt{2}}{8}$

$\boxed{\dfrac{7\sqrt{2}}{4}}$

c. $\dfrac{5}{3\sqrt{5}} \cdot \dfrac{\sqrt{5}}{\sqrt{5}}$

$\dfrac{5\sqrt{5}}{3 \cdot 5}$

$\dfrac{5\sqrt{5}}{15}$

$\boxed{\dfrac{\sqrt{5}}{3}}$

Final Jeopardy

Use a sratch piece of paper and find the original
(un-simplified) root. Turn in when finished.

$$7\sqrt{2}$$

inverses $\left\{\begin{array}{l}\sqrt{49}=7 \\ 7^2 = 49\end{array}\right.$

$$\sqrt{49}\,\sqrt{2}$$

$$= \sqrt{98}$$

Tonight's Assignment:
Radical Worksheet

Remember:
Right Triangles Quiz
Tuesday 2/18 Wednesday 2/19

Today's I Can Statements:
TR-1: I can simplify radicals
TR-2:I can perform mathematical operations with a radical