Week 25 Pre-Algebra Assignment:

Day 1: pp. 467-468 #2-24 even, 26-27
Day 2: pp. 473-474 #2-31 even
Day 3: p. 477 #1-10, 12-26 even
Day 4: p. 468 #32-41, p. 478 #36-41
Day 5: Worksheet

Notes on Assignment:

Pages 467-468 (#2-28 even)

Work to show:
#2-24: Show work
#26-28: Drawing and work to solve.

#2-8: Write the Pythagorean theorem with the leg lengths inserted. Simply the squares and solve for the hypotenuse. If the answer is not a perfect square, use your calculator to find the amount rounded to the nearest tenth.

#10: For this problem you are given a leg and a hypotenuse, so the equation will look a little different. Remember that if you can fill in numbers for all but 1 variable, you can solve for that variable. It looks like this:

$$a^2 + 20^2 = 52^2$$
$$a^2 + 400 = 2704$$
$$a^2 + 400 - 400 = 2704 - 400$$
$$a^2 = 2304$$
$$a = \sqrt{2304}$$
$$a = 48$$

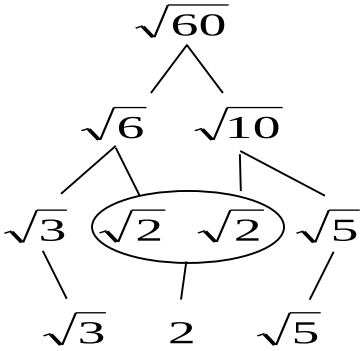
#18-24: Insert the lengths into the Pythagorean theorem and simplify to test to see if the theorem is true.

#26-27: Draw a picture of the information given. This will be a right triangle. One of the sides will be unknown. Make that side x. Use the Pythagorean theorem to find x.

Pages 473-474 (#2-32 even)

Work to show:
#2-22: Branching to simplify
#24-32: Show simplifying work

General notes for simplifying radicals: When you simplify radicals, please use the branching method that was shown in class. Below is a simple example:

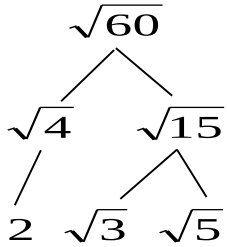


$$2\sqrt{15}$$

Simplify all radicals, and then for your final answer, multiply the radicals together and the numbers together.

Note: Whenever you multiply identical radicals together, we call them "buddies." Their product is just the number that is underneath (see the buddies in the example).

Here is the same example done another way:



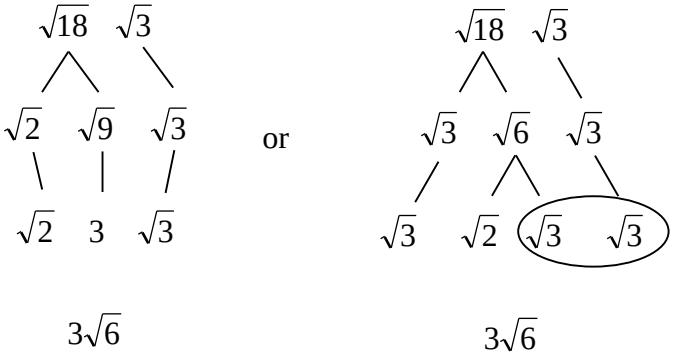
$$2\sqrt{15}$$

(If you can break the number down to include a perfect square, it will shorten the problem.)

#2-12: Simplify these like the example above.

General notes for multiplying radicals: For multiplying radicals, you have a choice: either multiply and then simplify, or simplify and then multiply. Usually you will want to simplify all radicals being multiplied and then put together buddies, etc. If you see some perfect squares that will show up if you multiply first, then go ahead and do that instead.

Example:



$3\sqrt{6}$ $3\sqrt{6}$

#14-20: Work these like the example above.

#22: Multiply the 3 and 2 together to get 6. Then multiply the two radicals and simplify.

#24-26: Put the numerator and denominator together under a single radical and simplify the fraction.

#28: Since the 2 is not under a radical, you can't put the numerator and denominator together under a single radical. Instead, simplify the radical on top and see if there is any canceling you can do. Remember that you can cannot cancel a number under a radical with a number not under a radical. You can cancel two numbers if they are both under radicals though.

Page 477 (#1-10, 12-26 even)

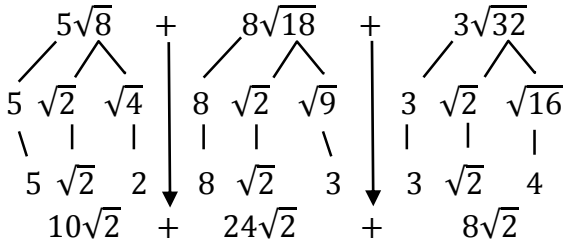
Work to show:

#1-10: Answers only

#12-26: Write the problem, show the walls and branching to simplify each radical, then combine like terms to get your final answer.

General notes for this section: Remember to put a "wall" where you see addition or subtraction. Simplify each radical separately and then only add like radicals just as you add like terms. The radicals must be identical or you cannot add them.

Example: $5\sqrt{8} + 8\sqrt{18} + 3\sqrt{32}$



#1-10: Combine like radicals like you would combine like terms. Think apples + apples = apples.

#6, 8: Put a 1 in front of the radical that does not have a number in front of it.

#12: Simplify the radical 9 first.

#14-26: Pattern your work after the example above.

Page 468 (#32-41)

Work to show:

#32-35: You can use a calculator on these problems.
#36-41: Show the expression or formula and then the answer. You can use a calculator.

#32-35: Refer to your handouts from chapter 10 if needed.

#36-37: These involve the fundamental counting principle.

#38-41: These involve combinations and permutations. Use the formula or draw boxes.

Page 478 (#36-41)

Work to show:

#36: stem-and-leaf diagram
#37: histogram
#38-41: OMIT THESE PROBLEMS

#37: Use the following intervals: 60-69, 70-79, 80-89, 90-100.

Worksheet

Work to show:

All problems: Show work on the worksheet

All problems: Use the previous examples and assignment notes for this review worksheet.