Week 28 Pre-Algebra Assignment:

Day 1: pp. 555-556 #1-27 odd
Day 2: pp. 565-566 #2-28 even
Day 3: pp. 571-572 #1-15, 16-20 even
Day 4: pp. 578-579 #1-23 odd
Day 5: pp. 584-585 #1-19, 28-30

Notes on Assignment:

Pages 555-556 (#1-27 odd)

General notes for this section: Use the formula for the area of a circle, $A = \pi r^2$.

Work to show:

All problems: You can use a calculator.
#1-11: Write the formula, fill it in, and solve for the missing quantity. Use 3.14 for π.
#13-27: Show work and all formulas used.

#1-11: Use the area formula. If you are given the diameter instead of the radius, make sure to split the diameter in half before putting it into the formula.

#13: Find the area of the larger circle and subtract the area of the smaller circle.

#15: These shapes are semicircles. Find the area of the circle and then split it in half.

#17: Divide the shape into 2 separate rectangles.

#19: Divide the shape into 2 semicircles and a rectangle. The 2 semicircles together form a full circle.

#21: Write the formula, fill in the given quantities and solve for the missing amount.

#23-27: Make sure to use the correct formula.

Pages 565-566 (#2-28 even)

Work to show:

All problems: You can use a calculator.
All problems: Write the formula, fill it in, and solve for the missing quantity. Use 3.14 for π where it applies.

General notes for this section: When finding the surface area of a prism or cylinder, you must find the area of the 2 bases and also the lateral surface area. Use the formulas listed on page 563 for prisms and page 564 for cylinders.

#2-4: A cube has 6 faces and they are all identical. Find the area of one face and multiply by 6 for the total surface area.

#6-8: Use L=pH to find the lateral surface area. Find the perimeter of the base and then multiply that by the height. Then calculate B, which is the area of the base. After you have that, use S=L+2B for the total surface area.

#10: This is a triangular prism. Even though it is resting on a rectangular face, make sure that you imagine it sitting on its triangular base. The triangle is the base.

#12: Take the formula for finding the surface are of a cube ($S = 6e^3$), fill in the number given for the surface area, and solve for the edge.

#14: The triangle that is the base has lengths 6, 7, and 8. The height is 10. Find the lateral surface area using L=pH.

#18: Find B (area of the circle). Find L by taking the circumference of the circle times the height. Then use S=L+2B for the surface area.

#20: Remember to split the diameter in half because you need the radius for the formula.

#24: The radius of the can is 3 cm, since the diameter is 6 cm.

#26: You just need the lateral surface area, not the base.

#28: There are 5 surfaces represented here.

Pages 571-572 (#1-15, 16-20 even)

Work to show:

All problems: You can use a calculator.
#1-9: Copy the table.
#10-20: Show work.

#1-9: Make sure these formulas are correct before continuing with the rest of the problems.

#10: Use $L = \frac{1}{2}pl$ for this problem. The slant length is 5.

#11: The base is a square.

#12: Add the answers for #10 and 11.

#13: Use $L = \pi rl$ for this problem.

#14: This is a circle of radius 5.

#15: Add the answers for #13 and 14.

#16: Use the formula for the surface area of a sphere, $S = 4\pi r$.

#18: Your net for this will look like the one on page 568 except that the base is a rectangle, so your triangles will not all be the same size. Then to find the total surface area, calculate the separate areas of the triangles and the rectangle and add them.

#20: Use the formula for pyramids. Notice that you are given a value for B so you don't have to calculate that. Just add it to the lateral surface area.

Pages 578-579 (#1-23 odd)

Work to show:

All problems: You can use a calculator.

All problems: Write the formula, fill it in, and solve for the missing quantity. Use 3.14 for π where it applies.

#1-3: These are prisms, so use the formula V=BH. For #1, you will need to calculate the area of the right triangle for B. Remember that in a right triangle, you can use one leg for the base and one for the height.

#5: When a capital H is used, it is the height of a solid, not the height of a flat figure. This problem is really the same as #3. You find the area of the base using lw and then multiply by the height.

#7-13: Use $V = \pi r^2 H$ for these problems. Use 3.14 for π and round to the nearest whole number.

#15-25: These problems are the same as #1-13, except that you have to use algebra to solve the equation, since what you are solving for is embedded in the equation. For example, for #15, you know that you have $V = (\frac{1}{2}bh)H$ for your formula. When you fill it in you get $175.5 = [\frac{1}{2}(4.5)(6)]H$. Since the H is on the right you will have to use some algebra to solve this:

$$175.5 = 13.5H$$
$$\frac{175.5}{13.5} = \frac{13.5H}{13.5}$$
$$H = 13$$

Pages 584-585 (#1-19, 28-30)

Work to show:

All problems: You can use a calculator.
#1-19: Write the formula, fill it in, and solve for the missing quantity. Use 3.14 for π where it applies.
#28-30: Show work.

General notes for this section: These problems are to be done similarly to the previous section, only using different formulas.

#1-3: These are prisms, so use the formula $V = \frac{1}{3}BH$. Remember that H is the height of the solid, not the slant height of the triangular faces.

#7-9 Use $V = \frac{1}{3}\pi r^2 H$ for these problems.

#13-19: Use $V = \frac{4}{3}\pi r^3$ for these problems.

#28: Remember to leave your answer in terms of π. Don't substitute 3.14 like in the previous problems.

#29: Do you see a right triangle? The hypotenuse of that triangle is the slant height. Use Pythagorean's Theorem!

#30: Use your answer from #29 and the formula for surface area from section 13.6.