

Geometry Week 16 Assignment:

Day 1: pp. 300-303 #1-17

Day 2: pp. 306-307 #1-13, 15-28

Day 3: Chapter 7 test

Day 4: pp. 314-315 #1-16, 19-24, 26-30

Day 5: pp. 321-22 #1-17, 21-23, 26-30

Notes on Assignment:

Pages 300-303:

Work to show:

#1-5: Trace (or photocopy) the figure, then copy it using constructions.

#6-17: Show constructions.

#6: Do this as was shown in class. Draw a line through P and a given line. Then copy the angle made, using P as the vertex of the copied angle.

#9: First construct 2 perpendicular lines. Mark off the side length from the point of intersection. Put your compass on each end of the sides you just marked off and make an arc. Where the arcs intersect is where your other vertex of the square is.

#10: Do this the same as you did #9, but when you draw the arcs for to find the last vertex, you will need to use 2 different compass settings – one for the shorter side and one for the longer side.

#11: Copy the angle first. Then mark off MN on the bottom ray of the angle, making N the vertex. Now you need to construct a line perpendicular to MN through point M.

#16: This is similar to #9, except that the angle is not a right angle. Copy $\angle FYZ$ and then mark off the side lengths and continue as in #9.

#17: Start by constructing an angle that is 75° . To do this, you will need to construct a 45° angle (by bisecting a right angle) and a 30° angle (by bisecting an equilateral triangle). These are separate constructions. (See previous construction instructions if needed.) Once you have these 2 angles constructed, you will need to copy the 45° angle, and then copy the 30° angle adjacent to that, so that together you have a 75° angle. Then copy $\angle PQR$ onto the one of the rays of your 75° angle.

Pages 306-307:

Work to show:

#1-3: Proofs

#4-7: Trace the triangle 4 times and do each problem on its own triangle.

#8-9: Answer only

#10: Construction only, no justification

#11: Answer only

#12-13: Proofs

#15-28: Answer as directed.

Chapter review – no notes

Chapter 7 test:

Notes on the test:

- Terms
- Reasons for impossible triangles
- Construct the centroid, orthocenter, incenter, and circumcenter
- Construct a line parallel to another line through a given point
- Right triangle congruency
- 1 proof (fill in the reasons)

*You cannot use your theorem sheet for this test!

Pages 314-315:

Note: You can use a calculator on this assignment.

Work to show:

#1-12: Show any work needed.

#13-16: Show the area of the pieces and then their sum (or difference).

#19-24: Write the formula, fill it in, and work it out.

CR: Show any work needed.

#1-5: Use the formula $A = s^2$.

#6-12: Use the formula $A = bh$.

#13-16: Assume that all corners are right angles. There is more than one way to divide the figures, so if yours does not match the key, but you get the same answer, that is ok.

#19: You will need to have all measurements in the same unit, so change everything to inches.

#20: Hint: A furlong in Bible times was 606.75 feet.

#21: Leave your answer in radical form.

#22-24: You will need to use either the Distributive Property or FOIL for these.

#26: Answer this in feet.

#29: What numbers does the angle x have to be between?

#30: What numbers does the side s have to be between?

Pages 321-322:

Work to show:

#1-6: Answers only

#7-16: Write the formula, fill it in, and work it out.

#17: Answer as directed.

#21: Answer only.

#22-23: Sketch the figure, label the sides, and find the height.

#17: In a parallelogram, both bases are the same. You do not have a b_1 and b_2 . So use the formula for trapezoid, using b for b_1 and b_2 and show how that simplifies to the formula for the area of a parallelogram.

#21: When factoring a quadratic like this, since there is no coefficient in front of the x^2 , you can write $(x \quad)(x \quad)$ and then ask yourself "What 2 numbers multiply to give you a -15 and add to give you 2? These are the numbers that go in the parentheses. Then set each binomial factor equal to zero and solve.

#22: This is just like the one we did in class. Refer to the overhead notes if you need to.