Semester Test – 50 questions. Be able to do the following **without notes or calculators**

1. Pythagorean Theorem – find the hypotenuse when given 2 leg measurements
2. Determine if a right triangle can be made if given three side measures
3. Convert a fraction into a decimal, like 55/88
4. Find the square root of a fraction such as 25/36
5. Solve 2 step equations like 2x + 4 = 16
6. Combine like terms, like 2a + 3 – a – 6 + b + 3a – 6b
7. Be able to look at a x y table and determine if the table follows a function rule
8. Be able to look at a x y table and determine if it has a proportional relationship
9. Be able to look at a x y table and determine if it is linear
10. Be able to pick out the slope and y intercept from an equation in y=mx+b form
11. Solve systems of equations by graphing (graph will be provided on test)
12. Solve systems of equations by elimination
13. Solve systems of equations by substitution
14. Put numbers in standard for into scientific notation and numbers in scientific form back into standard
15. Multiply variables in exponential form such as 4c2 times 8c3
16. Be able to divide variables in exponential form such as 12d10/6d2
17. Angles – be able to look at two parallel lines with one transversal and determine if angles of adjacent, corresponding, alternate interior, vertical and also be able to determine angle measures when only 1 angle measure given – so need to know complementary and supplementary angle relationship too
18. Know 180 degrees in a triangle, be able to determine missing angle measure of a triangle is 2 angle measures are given
19. Be able to determine missing side measure from two similar polygons
20. Know the angle sum formula n-2(180°) where n means number of sides of polygon. Be able to use this formula to determine missing angle measures of polygons where all but 1 angle measure is given. (we did this in scratch and in a math lesson)
21. Know your transformations: reflect, rotate, translate. We practice this on MangaHigh transtar – use that as way to refresh your memory
22. Know your basic 3-d shapes and their base names, including pyramids, prisms, cones, cylinders and sphere
23. You will be required to find volume of a cylinder
24. You will be required to find volume of a pyramid
25. You will be required to find volume and surface area of a sphere
26. You will be required to know about associations in scatterplots – positive, negative, no association, linear, non-linear
27. Vocabulary is included, particularly from chapter 10 – the most recent chapter on scatterplots