220 – Intro to Drawing – Trogu
Cube section measurements

Half scale example below:

CB = 1
BB short = square root of 2:   1.4142135623731
BB long = 2
BD = square root of 8:   2.82842712474619
(the above are for the example shown below at half scale, your design may differ)

Slate's cube section chart

Using the compass and handout pages 4B and 5, transfer all the distances AZ, BZ, CZ, DZ, and EZ onto your master template drawing. Simply draw a ceries of concentric circles using those measurements. The common center is Z (center of the cube). Note: if you actually used the point between B and D on the face of the cube, that distance is the square root of 2 -- we are calling it XZ – that circle is shown in red.

After all the concentric circles have been drawn, all the possible points that will determine your shapes are given in this circular grid. To find them, simply draw the circles (green in drawing at half scale) by taking the measurements from the face of your cube. In the half size example they are (left to right) CB, BB (short), BB (long), and BD.
Start by pointing the radius CB on the large CZ (radius) circle. Where it intersects the large circle B, that's the base of your first triangle. Draw the next circle BB (radius) and so on.

That example shown at half scale.You can use the full scale grid to construct your cube parts.

Thanks to Slate Werner for this clever grid system.

NOTE: This sheet MUST be printed at 100% in order for it to work. Double check after printing to see if the square below is exactly 4" x 4".
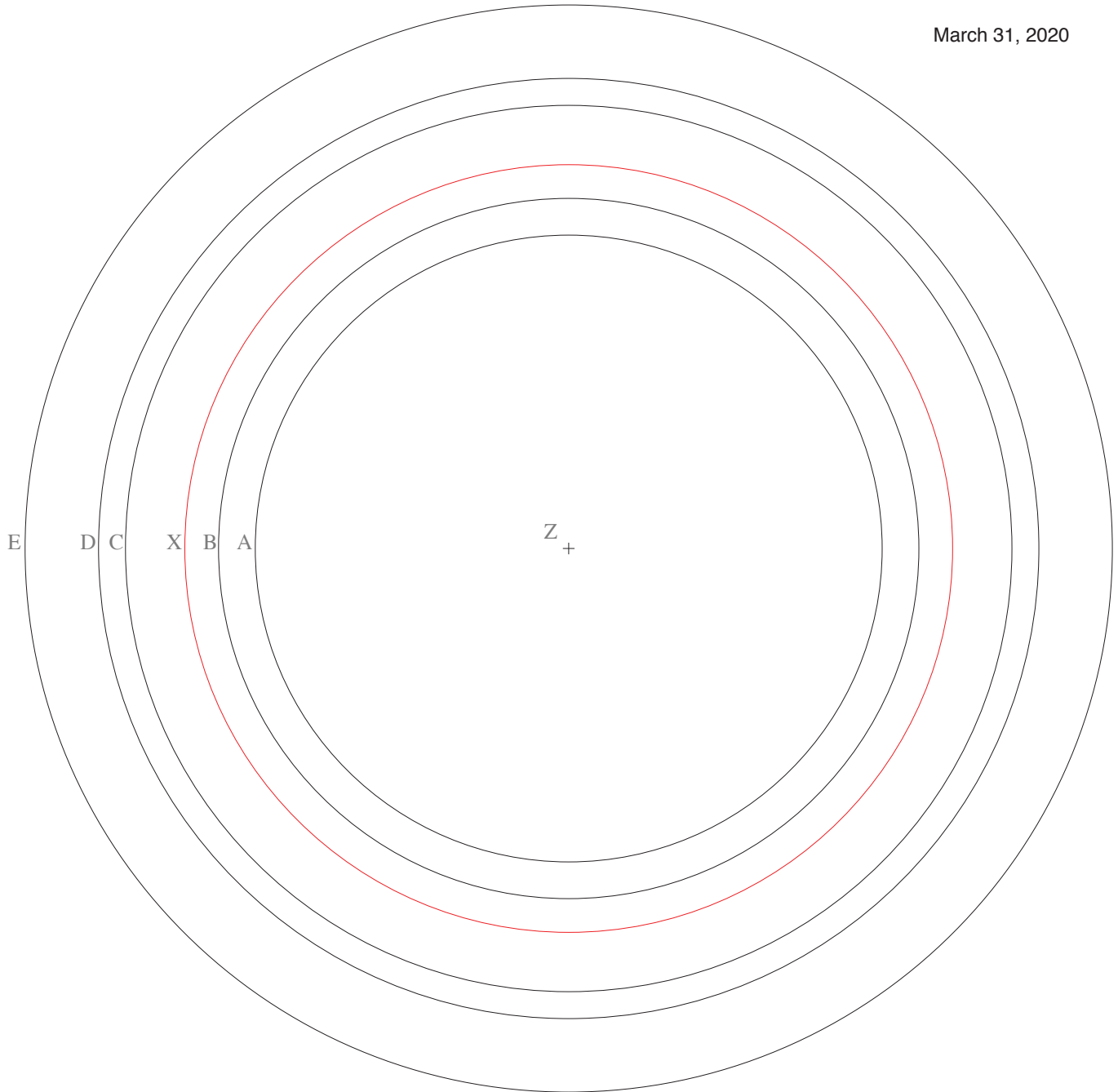
March 31, 2020

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Cube section measurements

Slate's cube section chart

Use the grid below if desired. Draw your face section on the full size
square grid first. Mark your points appropriately

March 31, 2020

E   D C   X B A   Z
                                            +

AZ (radius) =   2.0   diameter = 4.0
BZ (radius) =   2.234375   diameter = 4.46875
CZ (radius) =   2.828125   diameter = 5.65625   PAGE 2 of 2
DZ (radius) =   3.0   diameter = 6.0
EZ (radius) =   3.46875   diameter = 6.9375

XZ (radius) =   2.449489   diameter = 4.898979
                    (square root of 6)   NOTE: This sheet MUST be printed at 100% in order
                                         for it to work. Double check after printing to see if distance
                                         from circle D to center Z is exactly 3 inches