

Elliptical Templates Project  
Grading Rubric

Template: \_\_\_\_\_ Name: \_\_\_\_\_

Correct Values (13 points)

Total: \_\_\_\_\_

1.  $a = \frac{1}{2}$  of minor axis (3 Points) \_\_\_\_\_
2.  $b = \frac{1}{2}$  of major axis (3 Points) \_\_\_\_\_
3.  $c$  = distance from center to foci (3 Points) \_\_\_\_\_
4.  $d$  = pipe diameter (2 Points) \_\_\_\_\_
5.  $m$  = pitch of roof (2 Points) \_\_\_\_\_

Equation (10 Points)

Total: \_\_\_\_\_

1. Graphical form: (2 Points) \_\_\_\_\_
2. Equation Correct and typed (8 points) Max points of 3 if not typed. \_\_\_\_\_

Method (30 points)

Total: \_\_\_\_\_

1. Shows proper algebraic work for calculating “a” (4 points) \_\_\_\_\_
2. Shows proper algebraic work for calculating “b” (4 points) \_\_\_\_\_
3. Shows proper algebraic work for calculating “c” (4 points) \_\_\_\_\_
4. Shows proper algebraic work for calculating “d” (3 points) \_\_\_\_\_
5. Uses applicable illustrations to help visualize methods used (15 points) \_\_\_\_\_

3 Computerized illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work for ease of understanding – 15 points

3 Neat, non-computerized illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work for ease of understanding – 10 points

2 Computerized illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work – 8 points

2 Neat, non-computerized illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work – 6 points

3 Freehand illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work – 4 points

2 Freehand illustrations (one must be a cross-section of the situation), correctly labeled, corresponds to algebraic work – 2 points

Appearance (25 points) – Most is Teacher’s Judgment

Total: \_\_\_\_\_

1. Title and Template Number at top center of folder (5 points) \_\_\_\_\_
2. Neatly adds Color (5 points) \_\_\_\_\_
3. Illustrations are labeled to correspond with work and/or explanation (5 points) \_\_\_\_\_
4. Layout (5 points) – Process flows, organized, typed, understandable, etc  
(3 point penalty if too wordy) \_\_\_\_\_
5. Template hole is smooth and proportional, not jagged (5 points) \_\_\_\_\_

Exactness (22 points)

Total: \_\_\_\_\_

1. Pitch triangles are proportionate and secure (5 points) \_\_\_\_\_
2. Accuracy of pipe’s fit (17 points) – some leeway will be given to steeper pitches \_\_\_\_\_  
Perfect fit – Less than 2 mm error (17 points)  
Average fit – Between 2mm and 4 mm error (12 points)  
Poor fit – Between 4 mm and 6 mm error (6 points)  
Bad Fit – Between 6 mm and 8 mm error(2 points)  
Not Scorable – Greater than 8 mm error or positioned incorrectly

**Grand Total:**

\_\_\_\_\_