

To end your work with transformations, you are going to create your own "transformer" robot figure. You can use your own graph paper or the one provided. Your figure must include the following transformations:

To get a C grade:

- Two reflections where the line of reflection is either axis.
- Two translations. You must include the rule for each translation.
- Two unique rotations, (90° , 180° , 270°), where the pre-image is fully in quadrant I.

To get a B grade:

- Two reflections where the line of reflection is a horizontal or vertical line that is not an axis. You must give the name of each line of reflection (i.e. $y = 2$)
- Three translations. You must include the rule for each translation.
- Two unique rotations, (90° , 180° , 270°), where one of the pre-images is located in two quadrants.

To get an A grade:

- Two reflections where one line of reflection is $y = x$ and the other a horizontal or vertical line that is not an axis. You must give the name of this second line (i.e. $y = 2$)
- Four translations. You must include the rule for each translation.
- Two unique rotations, (90° , 180° , 270°), where the origin (0,0) is located in the interior of one of the pre-images and the other pre-image is located in two quadrants.

In addition to these, you may draw any additional segments, angles, polygons (shapes) you wish to complete the design of your figure. Color is not necessary but encouraged.

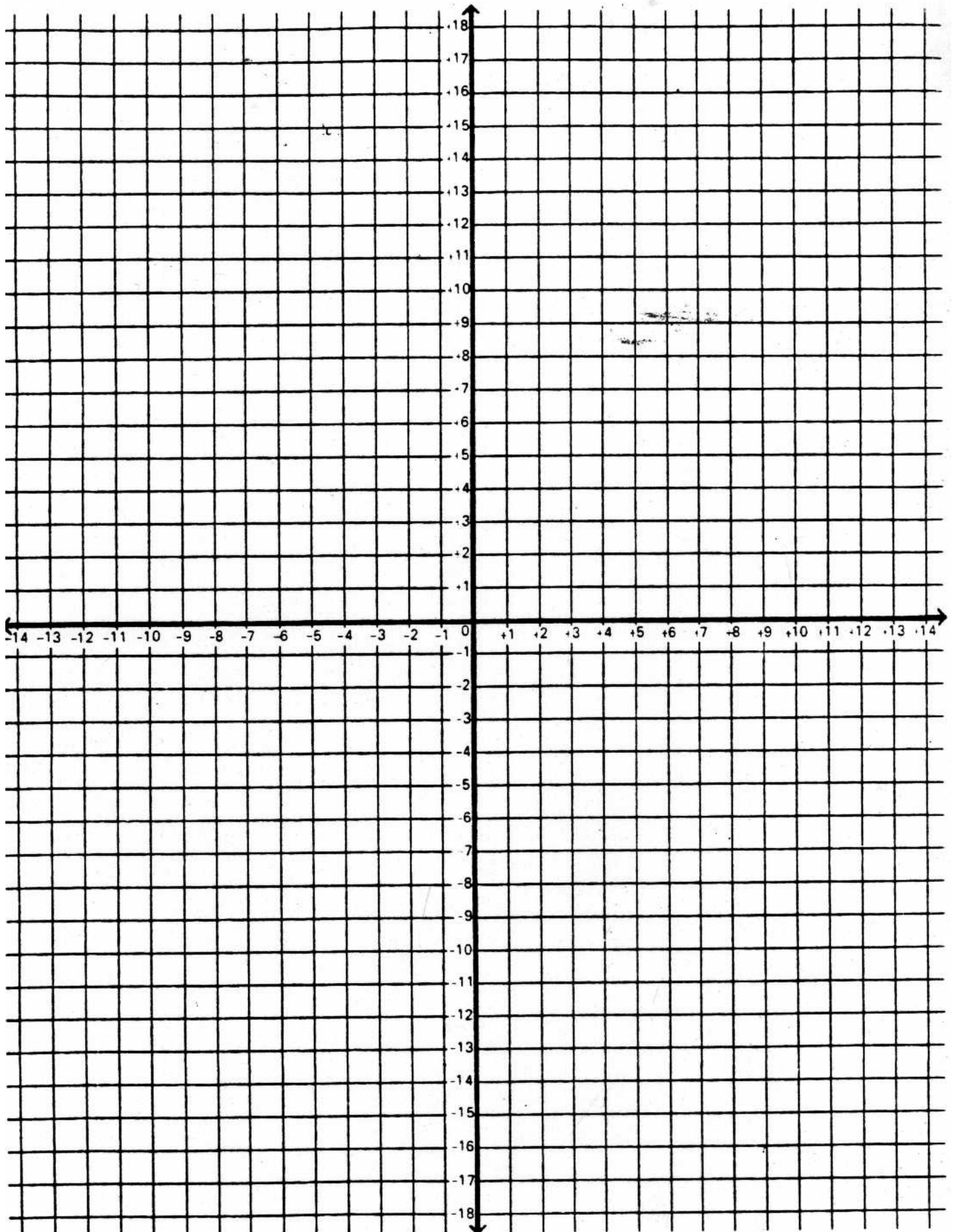
Your graph must be accompanied by a paragraph stating which grade you are going for and describing each transformation:

- for reflections, state the line of reflection you used (9.3)
- for translations, state the translation rule you used (9.1)
- for rotation, state the degree you rotated (9.4)

It will help you describe them if you label the pre-images and images. Also include a description of the robot with the following information:

- name
- autobot (good guy) or decepticon (bad guy)
- personality
- object it transforms into

Please review the **GRADING RUBRIC** on the back of this paper to ensure the best possible score.



Transformations Test RUBRIC

	1	2	3	4
C grade	Some required transformations are present	All required transformations are present with major errors	All required transformations are present with minor errors	All required transformations are present and correct.
B grade	Some required transformations are present	All required transformations are present with major errors	All required transformations are present with minor errors	All required transformations are present and correct.
A grade	Some required transformations are present	All required transformations are present with major errors	All required transformations are present with minor errors	All required transformations are present and correct.
Paragraph	Paragraph includes: <ul style="list-style-type: none"> • poor description of some or all transformations • description of the robot 	Paragraph includes: <ul style="list-style-type: none"> • adequate description of some transformations • good description of the robot 	Paragraph includes: <ul style="list-style-type: none"> • adequate description of each transformation • complete description of the robot 	Paragraph includes: <ul style="list-style-type: none"> • clear description of each transformation • complete description of the robot

LABELING:

You will place your label in the center of your figures.

R - reflection

P - Preimage

1 for first pair

T - translation

I - Image

2 for second pair

RO - rotation

Example:

In the center of the first figure you will reflect, you will write (R.P.1). Then in the center of the reflected figure you will write (R.I.1).