The "Write" Way:
Mathematics Journal Prompts for Algebra and Geometry

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Sample Journal Prompts

Content Prompts

Algebra

Rhonda said $\frac{8}{15} \div \frac{2}{3}$ was solved by dividing 8 by 2 and 15 by 3. Her quotient is $\frac{4}{5}$. Do you agree or disagree with her *method*? Why?

This prompt will provide some interesting looks at fractional division. New algorithms may be developed.

Which is larger, $5n$ or $-5n$? Give examples to support your answer.

Students should comment that the variable can assume both positive, negative, and zero values. Thus if n is positive, 5n is larger; if n is negative, –5n is larger, and if n is zero, they are equal.

Geometry

Arden said, "I have a method to help me determine if a polygon is convex or not convex." What do you think her method is? Describe and support it with an example or drawing.

Students may say they extend a side to see if it intersects the polygon, or they may use the idea that diagonals extend beyond the polygonal region.

David says two regular hexagons are always similar. Duane asks, "Are all isosceles triangles similar?" How do you think David answered Duane?

Responses should indicate that David will say that not all isosceles triangles are similar. He may tell Duane that an isosceles triangle with vertex angle measure of 40˚ would not be similar to an isosceles triangle with vertex angle measure of 50˚.

Process Prompts

Algebra

Tiana said, "I worked a problem but I can't tell if my answer is reasonable." What would you tell Tiana to do if her problem involved multiplication?

Students should give a mathematically appropriate way for determining reasonableness of products. This can include the number of digits in the product. You can change the prompt by substituting division, addition, or subtraction for multiplication.

To factor a trinomial, I must consider . . .

Responses will give you insight into students' development of generalizations related to factoring trinomials. You will be able to detect their process for factoring.

Geometry

I can justify my solution to a volume problem by . . .

Students should give an appropriate method for estimating or determining the reasonableness of an answer related to volume.

To draw a three-dimensional shape so that it is a good representation of the actual figure, I must consider . . .

Students often think of the three-dimensional representation with regard to hidden faces. You may find other possibilities in their responses.

Affective/Attitudinal Prompts

Algebra

I think an algebra student is (or is not) a mathematician because . . .

Draw a picture of a mathematician on a typical workday.
Describe the work a mathematician does.

Geometry

I will probably (or probably not) use geometry when I get a job because . .

Write a letter to your best friend describing what happens in our geometry class.

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