

Use Terms with Precision

Another way to help students with their understanding of mathematics vocabulary is to emphasize formal mathematics language in the classroom. What follows are examples in which students might hear and see terms within the same unit or class period, and it is essential to understand the differences or similarities among or between terms.

Formal mathematics language is important because this is the type of language that students read in texts and on standardized assessments. If students only experience informal mathematics language, it will be difficult for students to fully participate in mathematics and demonstrate their mathematics competency.

Each of these examples come from an article named *Supporting Clear and Concise Mathematics Language: Instead of That, Say This* (Hughes, Powell, & Stevens, 2016). The article can be accessed here:

<https://journals.sagepub.com/doi/10.1177/0040059916654901>



Here are examples of terms that should be used precisely within number and operations.

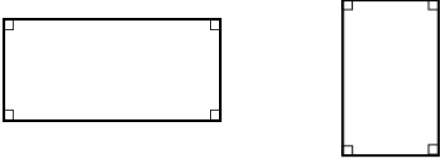
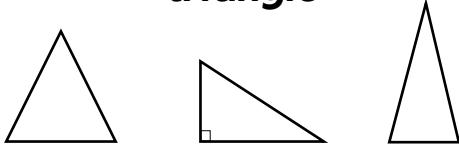
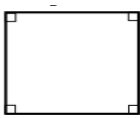
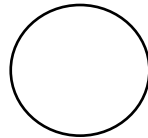




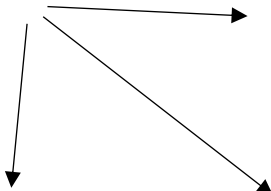
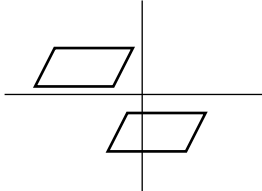
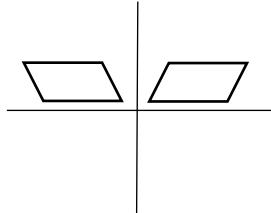
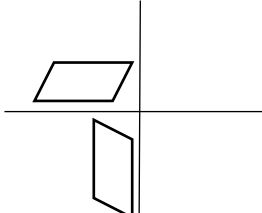

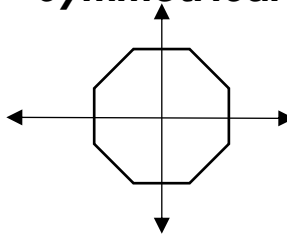
Terms That Require Specificity Number and Operations

ones tens hundreds digit compose decompose value		<div style="text-align: center;"> <p>hundreds tens ones</p> <p>→ ↓ ↘</p> <p>412</p> <p>"Four-hundred twelve," The <u>digit</u> 1 has a <u>value</u> of 10.</p> </div>	
great greater than > greater less less than < lesser the same as =		add addends sum	<div style="text-align: center;"> <p>15 + 9 = 24</p> <p>↙ ↘ ↗</p> <p>addends sum</p> </div>
		subtract subtrahend minuend difference	<div style="text-align: center;"> <p>24 - 9 = 15</p> <p>↙ ↗ ↘</p> <p>minuend subtrahend difference</p> </div>

Hughes, Powell, & Stevens (2016)

Here are examples of terms that should be used precisely within geometry.


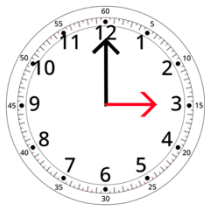

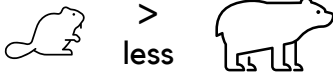

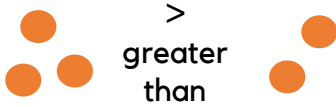
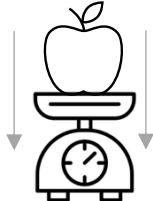


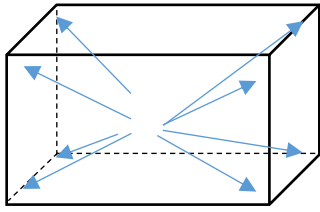
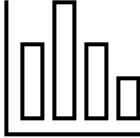
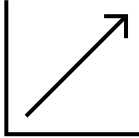
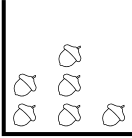

Terms That Require Specificity Geometry

<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>rectangle</p>  </div> <div style="text-align: center;"> <p>triangle</p>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>square</p>  </div> <div style="text-align: center;"> <p>circle</p>  </div> </div>	
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; flex-direction: column; align-items: flex-start; margin-bottom: 20px;"> <p>angle</p> <p>side</p> </div>  </div> <div style="display: flex; flex-direction: column; align-items: center;"> <p>edge</p> <p>face</p> <p>vertex</p> </div> 	<div style="text-align: center; margin-bottom: 20px;"> <p>congruent figures</p>  </div> <div style="text-align: center;"> <p>similar figures</p>  </div>
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;">transformation</p>  </div> <div style="width: 45%;"> <p style="text-align: center;">translation</p>  </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p style="text-align: center;">reflection</p>  </div> <div style="width: 45%;"> <p style="text-align: center;">rotation</p>  </div> </div>	
<div style="text-align: center; margin-bottom: 20px;"> <p>dilation</p>  </div> <div style="text-align: center;"> <p>symmetrical</p>  </div>	

Hughes, Powell, & Stevens (2016)

Here are examples of terms that should be used precisely within measurement.

Terms That Require Specificity Measurement

<p>minute minute hand</p> 	<p>hour hour hand</p> 	<p>length</p>  <p>"The length of the line is __ inches."</p>	
<p>less</p>  <p>> less than</p> <p>fewer</p>  <p>< fewer than</p> <p>greater</p>  <p>> greater than</p>	<p>weight</p>  <p>volume</p> 	<p>mass</p>  <p>___ g</p> <p>capacity</p> 	
<p>chart</p> 	<p>graph</p> 	<p>pictograph</p>  <p>Alvin Simon Theodore</p>	<p>picture</p> 

Hughes, Powell, & Stevens (2016)