

Mathematical Processes
COMMUNICATING - LOOK FORs

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| COMMUNICATING: |
| <i>Students will communicate mathematical thinking orally, visually, and in writing, using mathematical vocabulary and a variety of appropriate representations, and observing mathematical conventions.</i> |
| Respond to instructions orally, in writing, and visually, as appropriate (e.g., explain, demonstrate, justify, compare, prove, verify, evaluate, graph, solve algebraically, etc.) |
| Use correct and suitable mathematical language and vocabulary in explanations (e.g., root, zero, factor, function, family, restriction, radical, reciprocal, rational, polynomial, sinusoidal, exponential, inverse, parameter, intervals, asymptote, increasing/decreasing, domain, range, period, etc.) |
| Present thinking and arguments in a logical and organized manner |
| Respond clearly with sufficient details so that thinking can be understood |
| Interpret and summarize information from charts and graphs, providing appropriate detail (e.g., describe similarities and differences, identify key features, etc.) |
| Use the symbolic language of mathematics correctly; for example: <ul style="list-style-type: none"> • use = down the left side when simplifying expressions and in between two equal expressions when solving equations; • use inequality symbols to represent intervals, or solutions to inequalities • use $f(x)$ for function notation, $f^{-1}(x)$ for inverse function • accurately and fully label graphs, asymptotes, key features required, etc. • correctly express trigonometric functions with an associated angle • correctly express exponential functions with an associated base • proper use of brackets when required |
| Read and reread all of the given information and instructions to ensure understanding (e.g., identify key information needed to solve the problem) |
| Communicate mathematical learning by combining various representations; for example: <ul style="list-style-type: none"> • words with diagrams • charts or graphs with verbal descriptions • algebraic representations with graphical representations |

