## and connections with the

## NCTM Standards

| National Council for Teachers of Mathematics (NCTM) Standards |  |  |  | $\begin{aligned} & \stackrel{5}{\vdots} \\ & \stackrel{ \pm}{ \pm} \\ & 0 \\ & \hline \end{aligned}$ |  |  |  | $\begin{aligned} & \frac{\varrho}{4} \\ & \frac{1}{4} \\ & 0 \\ & \frac{1}{3} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number and Operations |  |  |  |  |  |  |  |  |
| Understand numbers, ways of representing numbers, relationships among numbers, and number systems |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| Understand meanings of operations and how they relate to one another |  | - | - | - | - | - | - | $\bullet$ |
| Compute fluently and make reasonable estimates |  | - | $\bullet$ | $\bullet$ | - | - | $\bullet$ | $\bullet$ |
| Algebra |  |  |  |  |  |  |  |  |
| Understand patterns, relations, and functions |  | - | - | - |  |  | - | $\bullet$ |
| Represent and analyze mathematical situations and structures using algebraic symbols |  | $\bullet$ | $\bullet$ | $\bullet$ |  | - | $\bullet$ | $\bullet$ |
| Use mathematical models to represent and understand quantitative relationships |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| Geometry |  |  |  |  |  |  |  |  |
| Analyze characteristics and properties of 2- and 3dimensional geometric shapes and develop mathematical arguments about geometric relationships |  |  |  |  | $\bullet$ |  |  |  |
| Specify locations and describe spatial relationships using coordinate geometry and other representationa systems | $\bullet$ |  |  |  |  |  |  |  |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Problem Solving |  |  |  |  |  |  |  |  |
| Build new mathematical knowledge through problem solving | - | - | - | - | - | - | $\bullet$ | - |
| Reasoning and Proof |  |  |  |  |  |  |  |  |
| Recognize reasoning and proof as fundamental aspects of mathematics | - | - | - | - | - | - | - | - |
| Communication |  |  |  |  |  |  |  |  |
| Organize and consolidate their mathematical thinking through communication | - | - | - | - | - | - | - | - |
| Communicate their mathematical thinking coherently and clearly to peers, teachers, and others | - | - | - | - | - | - | - | - |
| Use the language of mathematics to express mathematical ideas precisely | $\bullet$ | - | - | - | - | - | - | - |
| Connections |  |  |  |  |  |  |  |  |
| Recognize and use connections among mathematical ideas | - | - | - | - | - | - | - | - |
| Understand how mathematical ideas interconnect and build on one another to produce a coherent whole | - | - | - | - | - | - | - | - |
| Representation |  |  |  |  |  |  |  |  |
| Create and use representations to organize, record, and communicate mathematical ideas | - | - | - | - | - | - | - | - |

