| STRAND | STANDARD | OBJECTIVES <br> (What it looks like in the classroom) <br> The learner will ... |  |  |  | ASSESSME NT <br> TYPE <br> (classroom, STAR, objective, subjective, project, etc.) | $\begin{aligned} & \hline \text { RESO } \\ & \text { URCE } \\ & \text { S } \\ & \text { (Mater } \\ & \text { ials, } \\ & \text { web } \\ & \text { sites, } \\ & \text { auto- } \\ & \text { visual, } \\ & \text { print) } \end{aligned}$ | LEARNING ACTIVITIES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12.1 <br> NUMERATION <br> /NUMBER <br> SENSE | 12.1.1 By the end of twelfth grade, students will describe and compare the relationships between subsets of real numbers. | Write and compare types of real numbers (2) | $\underset{\sim}{\perp}$ |  |  | Classroom |  |  |
|  | 12.1.2 By the end of twelfth grade, students will express the equivalent forms of numbers using exponents, radicals, scientific notation, absolute values, fractions, decimals, and percents. | Write and perform operations on numbers in scientific notation (8.5) | $\underset{~ N ~}{\text { m }}$ |  |  | Classroom |  |  |
|  |  | Use and simplify radical numbers $(9.3,12.2)$ | $\underset{\text { en }}{\substack{2}}$ | $\sum_{2}^{\pi} 1$ | $\begin{aligned} & \sum_{0}^{\pi} \\ & 0_{i}^{2} \end{aligned}$ | Classroom |  |  |
|  |  | Solve problems involving exponent properties (8) | $\underset{\text { én }}{\substack{2}}$ | $\begin{aligned} & \stackrel{0}{0} \\ & \dot{1} \\ & \stackrel{1}{\ddot{H}} \\ & \text { H } \end{aligned}$ | $\begin{aligned} & \stackrel{U}{0} \\ & \stackrel{1}{U} \\ & \stackrel{\rightharpoonup}{4} \end{aligned}$ | Classroom |  |  |


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| STRAND | STANDARD | OBJECTIVES <br> （What it looks like in the classroom） <br> The learner will ．．． |  |  |  | ASSESSME <br> NT <br> TYPE <br> （classroom， STAR， objective， subjective， project，etc．） | RESO URCE S （Mater ials， web sites， auto－ visual， print） | LEARNING ACTIVITIES |
|  |  | Graph and interpret interest and other exponential growth functions（8） | $\underset{~}{\text { m }}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \frac{1}{4} \\ & \text { ì } \end{aligned}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \dot{1} \\ & \text { 荀 } \\ & \text { in } \end{aligned}$ | Classroom |  |  |
| $12 . .2$ COMPUTATION ／ESTIMATION | 12．2．1 By the end of twelfth grade，students will solve theoretical and applied problems using numbers in equivalent forms，radicals， exponents，scientific notation，absolute values， fractions，decimals，and percents，ratios and proportions，order of operations，and properties of real numbers． | Approximate radical numbers（9．1） | $\underset{\sim}{N}$ | $\begin{aligned} & \text { む̀ } \\ & \text { OU } \\ & 0.0 \end{aligned}$ | $\begin{aligned} & \text { Ü } \\ & \stackrel{0}{0} \\ & 0.0 \\ & 0 \end{aligned}$ | Classroom |  |  |
|  |  | perform operations on numbers in scientific notation（8．5） | $\underset{\sim}{\perp}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & 0 \\ & \stackrel{1}{\ddot{0}} \\ & \stackrel{\rightharpoonup}{4} \end{aligned}$ |  | Classroom |  |  |
|  |  | use proportions to solve percent problems（3．9，11．1） | $\underset{\sim}{\perp}$ | $\sum_{\substack{\text { e }}}^{\text {灾 }}$ | $\sum_{\substack{\text { İ}}}^{\stackrel{~}{0}}$ | Classroom |  |  |


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| STRAND | STANDARD | OBJECTIVES <br> (What it looks like in the classroom) <br> The learner will ... |  |  |  | ASSESSME <br> NT <br> TYPE <br> (classroom, <br> STAR, <br> objective, <br> subjective, <br> project, etc.) | RESO URCE S (Mater ials, web sites, auto- visual, print) | LEARNING ACTIVITIES |
|  |  | solve and graph equations with absolute values $(6.6,6.7)$ | $\underset{\sim}{N}$ | $\sum_{\sum}^{\text {I }}$ | $\sum_{\sum}^{\text {İ }}$ | Classroom |  |  |
|  |  | Solve equations involving radicals (9) | $\underset{\sim}{N}$ | $\begin{aligned} & z \\ & Z \end{aligned}$ | $\begin{aligned} & \vec{Z} \\ & \mathbf{Z} \end{aligned}$ | Classroom |  |  |
|  | 12.2.2 By the end of twelfth grade, students will justify solutions to mathematical problems. | Determine reasonableness of a solution |  | $\begin{aligned} & 00 \\ & \text {.户 } \\ & \text { 00, } \\ & 0 \end{aligned}$ |  | Classroom |  |  |
|  | 12.2.3 By the end of twelfth grade, students will perform estimations and computations of real numbers mentally, with paper and pencil, and with technology. | Estimate solutions, solve equations with mental math and estimation |  |  | $\begin{aligned} & \text { :00 } \\ & \text { 言 } \\ & \text { O } \end{aligned}$ | Classroom |  |  |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12.. 3 <br> MEASUREMENT | 12.3.1 By the end of twelfth grade, students will select and use measuring units, tools, and/or technology and explain the degree of accuracy and precision of measurements. |  |  |  |  |  |  |  |
|  | 12.3.2 By the end of twelfth grade, students will convert between metric and standard units of measurement, given conversion factors. |  |  |  |  |  |  |  |
| 12.4 GEOMETRY /SPATIAL CONCEPT | 12.4.1 By the end of twelfth grade, students will calculate perimeter and area of twodimensional shapes and surface area and volume of three-dimensional shapes. |  |  |  |  |  |  |  |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12.4.2 By the end of twelfth grade, students will create geometric models to describe the physical world. |  |  |  |  |  |  |  |
|  | 12.4.3 By the end of twelfth grade, students will evaluate characteristics and properties of two- and three-dimensional geometric shapes. |  |  |  |  |  |  |  |
|  | 12.4.4 By the end of twelfth grade, students will apply coordinate geometry to locate and describe objects algebraically. | Use distance and midpoint formulas (12) | $\underset{\sim}{\sim}$ | $\sum_{\Sigma}^{\text {In }}$ | $\sum_{\Sigma}^{\text {In }}$ | Classroom |  |  |
|  | 12.4.5 By the end of twelfth grade, students will apply right triangle trigonometry to find length and angle measures. |  |  |  |  |  |  |  |


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| STRAND | STANDARD | OBJECTIVES <br> (What it looks like in the classroom) <br> The learner will ... |  |  |  | ASSESSME <br> NT <br> TYPE <br> (classroom, STAR, objective, subjective, project, etc.) | RESO URCE S (Mater ials, web sites, auto- visual, print) | LEARNING ACTIVITIES |
|  | 12.4.6 By the end of twelfth grade, students will apply geometric properties to solve problems. |  |  |  |  |  |  |  |
|  | 12.4.7 By the end of twelfth grade, students will apply deductive reasoning to arrive at a conclusion. |  |  |  |  |  |  |  |
| 12.5 Probability and Statistics | 12.5.1 By the end of twelfth grade, students will select a sampling technique to gather data, analyze the resulting data and make inferences. | Collect, organize and interpret data |  | $\begin{aligned} & \text { D } \\ & \text { B } \\ & \text { on } \end{aligned}$ |  | Classroom |  |  |
|  | 12.5.2 By the end of twelfth grade, students will write equations and make predictions from sets of data. | Collect, organize and interpret data |  |  |  | Classroom |  |  |

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| STRAND | STANDARD | OBJECTIVES (What it looks like in the classroom) The learner will .. |  |  |  | ASSESSME NT TYPE (classroom, STAR, objective, subjective, project, etc.) | RESO <br> URCE <br> S <br> (Mater ials, web sites, autovisual, print) | LEARNING ACTIVITIES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12.5.3 By the end of twelfth grade, students will apply theoretical probability to represent problems and make decisions. |  |  |  |  |  |  |  |
|  | 12.5.4 By the end of twelfth grade, students will evaluate how transformations on data affect the measures of central tendency and variability. |  |  |  |  |  |  |  |
|  | 12.5.5 By the end of twelfth grade, students will interpret data represented by the normal distribution and formulate conclusions. |  |  |  |  |  |  |  |
|  | 12.5.6 By the end of twelfth grade, students will calculate probabilities of independent events. |  |  |  |  |  |  |  |


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| STRAND | STANDARD | OBJECTIVES <br> （What it looks like in the classroom） <br> The learner will ．．． |  |  |  | ASSESSME <br> NT <br> TYPE <br> （classroom， STAR， objective， subjective， project，etc．） | $\begin{aligned} & \hline \text { RESO } \\ & \text { URCE } \\ & \text { S } \\ & \text { (Mater } \\ & \text { ials, } \\ & \text { web } \\ & \text { sites, } \\ & \text { auto- } \\ & \text { visual, } \\ & \text { print) } \end{aligned}$ | LEARNING ACTIVITIES |
| 12．6 ALGEBRAIC CONCEPTS | 12．6．1 By the end of twelfth grade，students will graph and interpret algebraic relations and inequalities． | Graph linear eq＇s and inequalities（4） | $\stackrel{M}{N}$ |  |  | Classroom |  |  |
|  |  | Write equations in different forms（slope－int，point－slope） <br> （5） | $\stackrel{1}{4}$ |  |  | Classroom |  |  |
|  |  | Graph quadratic eq＇s and ineq＇s（9） | $\stackrel{M}{N}$ | 㦴 | $\begin{aligned} & \text { む̀ } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | Classroom |  |  |
|  |  | Write，evaluate and simplify algebraic expressions（1） | $\underset{\sim}{\perp}$ | 苞 | $\begin{aligned} & \stackrel{\rightharpoonup}{x} \\ & \stackrel{20}{200} \\ & \frac{20}{4} \end{aligned}$ | Classroom |  |  |
|  | 12．6．2 By the end of twelfth grade，students will solve problems involving equations and inequalities． | solve problems involving linear equations and inequalities $(3,6)$ | $\stackrel{M}{N}$ | $\begin{aligned} & \text { む } \\ & \text { 命 } \end{aligned}$ |  | Classroom |  |  |
|  |  | Solve quadratic equations and inequalities $(9,10)$ | $\stackrel{N}{N}$ |  | $$ | Classroom |  |  |

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| STRAND | STANDARD | OBJECTIVES <br> （What it looks like in the classroom） <br> The learner will ．．． |  |  |  | ASSESSME <br> NT <br> TYPE <br> （classroom， STAR， objective， subjective， project，etc．） | $\begin{aligned} & \hline \text { RESO } \\ & \text { URCE } \\ & \text { S } \\ & \text { (Mater } \\ & \text { ials, } \\ & \text { web } \\ & \text { sites, } \\ & \text { auto- } \\ & \text { visual, } \\ & \text { print) } \end{aligned}$ | LEARNING <br> ACTIVITIES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Solve literal equations（3．7） | $\stackrel{N}{N}$ | $\begin{aligned} & \text { む̀ } \\ & \stackrel{0}{0} \\ & 0.0 \end{aligned}$ | $\begin{aligned} & \text { Ü } \\ & \stackrel{0}{0} \\ & 0.0 \\ & 0 \end{aligned}$ | Classroom |  |  |
|  | 12．6．3 By the end of twelfth grade，students will solve problems involving systems of two equations，and systems of two or more inequalities． | solve systems of linear equations and inequalities（7） | $\stackrel{N}{N}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\omega} \\ & \stackrel{y y}{200} \\ & \frac{20}{4} \end{aligned}$ |  | Classroom |  |  |
|  | 12．6．4 By the end of twelfth grade，students will solve problems using patterns and functions． | Graph and interpret exponent functions（8） | $\stackrel{N}{N}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \stackrel{1}{\Delta} \\ & \stackrel{\rightharpoonup}{ت} \\ & \ddot{\sim} \end{aligned}$ |  | Classroom |  |  |
|  |  | Graph and perform operations on rational functions（11） | $\stackrel{N}{N}$ | 究変 | 景公 | Classroom |  |  |

