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| Geometry <br> translations: [8-G1] |  |  |  |
| a. Lines are taken to lines, and line segments are taken to line segments <br> of the same length. [8-G1a] <br> b. Angles are taken to angles of the same measure. [8-G1b] |  |  |  |
| c. Parallel lines are taken to parallel lines. [8-G1c] |  |  |  |
| 18. Describe the effect of dilations, translations, rotations, and <br> reflections on two-dimensional figures using coordinates. [8-G3] |  |  |  |

17. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations,

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| 20. Example: Arrange three copies of the same triangle so that the sum <br> of the three angles appears to form a line, and give argument in terms of <br> transversals why this is so. |  |  |  |
| Expressions and Equations |  |  |  |
| 8. Use similar triangles to explain why the slope m is the same between <br> any two distinct points on a non-vertical line in the coordinate plane; <br> derive the equation $y=m x$ for a line through the origin and the <br> equation $y=m x+b$ for a line intercepting the vertical axis at b. <br> [8-EE6] |  |  |  |
| Geometry |  |  |  |
| 24. Know the formulas for the volumes of cones, cylinders, and spheres, <br> and use them to solve real-world and mathematical problems. [8-G9] |  |  |  |
| Statistics and Probability |  |  |  |
| 25. Construct and interpret scatter plots for bivariate measurement data <br> to investigate patterns of association between two quantities. <br> Describe patterns such as clustering, outliers, positive or negative <br> association, linear association, and nonlinear association. [8-SP1] |  |  |  |

