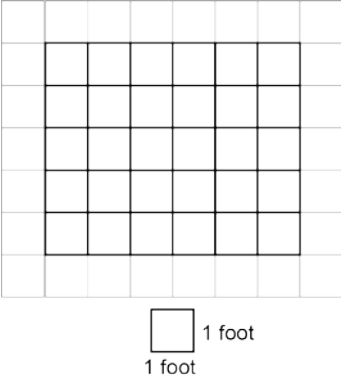
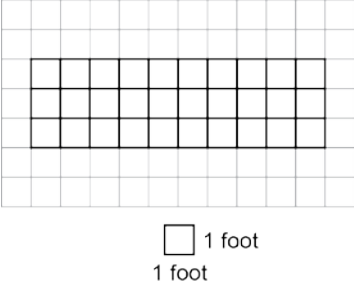


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| Content Standard                                                                                                                                                                                | <b>MAFS.Content.3.MD Measurement and Data</b><br><br><b>MAFS.Content.3.MD.3</b> <i>Geometric measurement: understand concepts of area and relate area to multiplication and addition.</i><br><br><b>MAFS.3.MD.3.5</b> Recognize area as an attribute of plane figures and understand concepts of area measurement.<br><br><b>MAFS.3.MD.3.5a</b> A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.<br><br><b>MAFS.3.MD.3.5b</b> A plane figure which can be covered without gaps or overlaps by $n$ unit squares is said to have an area of $n$ square units.<br><br>Also Assessed:<br><br><b>MAFS.3.MD.3.6</b> Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). |                          |                 |
| Assessment Limits                                                                                                                                                                               | Plane figures that can be covered by unit squares.<br>Exponential notation is not expected at this grade level (square cm is acceptable, but $\text{cm}^2$ is not).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                 |
| Calculator                                                                                                                                                                                      | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                 |
| Acceptable Response Mechanisms                                                                                                                                                                  | Equation Response<br>Multiple Choice Response<br>Multi-Select Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                 |
| Context                                                                                                                                                                                         | Allowable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                 |
| Example                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                 |
| Context                                                                                                                                                                                         | Alex is designing a floor with tiles to determine the area. (A graphic of a 10 by 2 rectangle is shown.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                 |
| Context easier                                                                                                                                                                                  | Limit to single-digit side lengths.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                 |
| Context more difficult                                                                                                                                                                          | Increase side lengths of figures. (Note: Factors should be within 100 and should not require students to needlessly count large numbers of tiles.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                 |
| Sample Item Stem                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Response Mechanism       | Notes, Comments |
| Alex counts the tiles of his floor.<br>What measurement does Alex find?<br><br>A. The width of one tile<br>B. The cost of one tile<br>C. The perimeter of the floor<br>D. The area of the floor |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Multiple Choice Response |                 |

|                                                                                                                                                                                          |                                 |  |
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| <p>Alex's floor is shown.</p>  <p>What is the area of Alex's floor in square feet?</p>                  | <p>Multiple Choice Response</p> |  |
| <p>Alex put the tiles shown on his floor.</p>  <p>What is the area of Alex's floor in square feet?</p> | <p>Equation Response</p>        |  |

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| <p>The area of Alex's floor is 30 square feet.<br/>Select all the floors that could be Alex's.</p> <div data-bbox="188 306 420 539"> </div> <div data-bbox="282 552 367 604"> <input type="checkbox"/> 1 foot<br/>1 foot         </div> <div data-bbox="188 640 435 806"> </div> <div data-bbox="290 819 371 869"> <input type="checkbox"/> 1 foot<br/>1 foot         </div> <div data-bbox="188 905 454 1066"> </div> <div data-bbox="298 1077 384 1129"> <input type="checkbox"/> 1 foot<br/>1 foot         </div> <div data-bbox="188 1165 446 1318"> </div> <div data-bbox="295 1327 380 1375"> <input type="checkbox"/> 1 foot<br/>1 foot         </div> <div data-bbox="214 1371 469 1593"> </div> <div data-bbox="318 1600 406 1652"> <input type="checkbox"/> 1 foot<br/>1 foot         </div> | <p>Multi-Select Response</p> |  |
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