|  |  |  |  |
| --- | --- | --- | --- |
| **Content: Using Scale Diagrams to Solve Problems** | | | |
| Uses a scale factor to identify an enlargement and a reduction  “Since 1 cm on the scale diagram represents 10 cm in the real world, the scale diagram is a reduction.” | Uses the scale factor of a scale diagram to solve problems where the units are the same  “Since 1 cm on the scale diagram represents 10 cm in the real world, I know the scale is 1:10. So, if the actual length is 50 cm, the length on the scale diagram is 5 cm.” | Recognizes that a scale factor can be written in several ways and intentionally chooses which way to use  “The scale given is  5 cm:42 m. I can also write this as 1 cm:8.4 m or 1 cm:840 cm. I need to determine an answer in metres, so I’ll use 1 cm:8.4 m.” | Writes a proportion to solve for an unknown measure in problems involving scale diagrams  “I know that the scale is 5 cm:42 m. If I know an actual measure is  85 m, I can write the proportion , then solve for *x* to find the measure on the scale diagram.” |
| **Observations/Documentation** | | | |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Competency: Representing Situations Using Scale Diagrams** | | | |
| Recognizes whether a reduction or enlargement is needed to represent a given situation  “I need to show a long distance in a small space, so my scale diagram will be a reduction.” | Chooses an appropriate scale factor to represent a situation using a scale diagram  “These two locations are 15 km apart. I want them to fit on my piece of paper so I will reduce the distance by using a scale of 1 cm:5 km.” | Uses scale factor to accurately draw a scale diagramto represent a situation  “The distances I need to represent are 15 km, 20 km, and 5 km. If my scale factor is 1 cm:5 km, I can represent them with lines of lengths 3 cm, 4 cm, and 1 cm.” | Uses appropriate scale to optimize diagram and recognizes multi-directional scaling  “I drew a rectangle around all my points. Then I found the distance from a side of the rectangle to each point. This helped me find the exact location when I placed the points on my scale diagram. “ |
| **Observations/Documentation** | | | |
|  |  |  |  |