**Course: Geometry**

**Unit 1: Foundations for Geometry**

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<tr>
<td>1.1. ...Identify, name and draw points, lines, rays and planes. Apply basic facts about points, lines and planes.</td>
<td>1. Name a plane.</td>
<td><img src="image" alt="Diagram" /></td>
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<td></td>
<td>2. Name a segment.</td>
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<td>3. Name a line.</td>
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<td>4. Name three collinear points.</td>
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<td>5. Name the intersection of a line and a segment not on the line.</td>
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<td>6. Name a pair of opposite rays.</td>
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| 1.2. ...Understand how to find the length and midpoint of a segment. | **H is between I and J**  
1. \( HI = 3.9 \) and \( HJ = 6.2 \). Find \( IJ \).  
2. \( HJ = 25 \) and \( IH = 13 \). Find \( HJ \).  
3. \( H \) is the midpoint of segment \( IJ \), and \( IH = 0.75 \). Find \( HJ \).  
4. \( H \) is the midpoint of segment \( IJ \), and \( IJ = 9.4 \). Find \( IH \). |  |  |  |
| 1.3a. ...Define and identify acute, right, obtuse and straight angle. Name angles properly. | \( \angle ABC \) and \( \angle CBD \) form a linear pair and have equal measures.  
Tell if \( \angle ABC \) is acute, right, or obtuse. |  |  |  |
| 1.3b. ... Find measures of angles using information about angle type and measures of adjacent angles. | **T is in the interior of \( \angle PQR \).** Find each of the following.  
1. \( m\angle PQT \) if \( m\angle PQR = 25^\circ \) and \( m\angle RQT = 11^\circ \)  
2. \( m\angle PQR \) if \( m\angle PQR = (10x - 7)^\circ \), \( m\angle RQT = 5x^\circ \), and \( m\angle PQT = (4x + 6)^\circ \)  
3. \( m\angle PQR \) if \( QT \) bisects \( \angle PQR \), \( m\angle RQT = (10x - 13)^\circ \), and \( m\angle PQT = (6x + 1)^\circ \) |  |  |  |
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| 1.4a. ...Identify adjacent, vertical, complementary and supplementary angles. | ∠PQR and ∠SQR form a linear pair.  
1. Find the sum of their measures.  
2. Name the ray that ∠PQR and ∠SQR share. | | | |
| 1.4b. ...Find measures of pairs of angles. | ∠DEF and ∠FEG are complementary.  
m∠DEF = (3x - 4)°, and m∠FEG = (5x + 6)°.  
Find the measures of both angles.  
An angle measures 12 degrees less than three times its supplement.  
Find the measure of the angle. | | | |
| 1.5. ...Apply formulas for perimeter and area of a square, rectangle and triangle.  
Apply formulas for the circumference and area of a circle. | Find the perimeter and area of the triangle.  
| | | |
| 1.6a. ...Develop and apply the formula for midpoint and distance. | Y is the midpoint of segment XZ.  
X has coordinates (2, 4), and Y has coordinates (–1, 1).  
Find the coordinates of Z. | | | |
| 1.6b. ...Use the distance formula and the Pythagorean Theorem to find the distance between two points. | Use the Distance Formula to find the distance, to the nearest tenth, between K(7, 4) and L(2, 0).  
Use the Pythagorean Theorem to find the distance, to the nearest tenth, between F(9, 5) and G(–2, 2). | | | |
| 1.7. ...Identify the following transformations: reflections, rotations and translations.  
Graph transformations on a coordinate plane. | A figure has vertices at D(-2, 1), E(-3, 3), and F(0, 3).  
After a transformation, the image has vertices at D′(-1, -2), E′(-3, -3), and F′(-3, 0).  
Draw the preimage and the image. Then identify the transformation. | | | |