**Chp 1: Tools of Geometry**

**1-3: Points, Lines, and Planes**

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| **Point:** | **Line:** | **Collinear Points:** |
| **Plane:** | **Coplanar:** | **Postulate:** |

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| --- | --- |
| **Postulate 1-1:** | **Postulate 1-2:** |
| **Postulate 1-3:** | **Postulate 1-4:** |

**Examples:**

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| --- | --- |
| Using the following picture, answer the following questions: | 1. Name another way
2. Give two other names for plane Q
3. Are and point C collinear?
4. Are points B and F collinear? Coplanar?
5. Are and  coplanar?
 |
| Find the intersection of the following lines and planes in the figure at the right1. and
2. Planes GLM and LPN
3. and plane KJN
 |  |

**1-4: Segments, Rays, Parallel Lines, and Planes**

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| **Segment:** | **Ray:** | **Opposite Rays:** |
| **Parallel Lines:** | **Skew Lines:** | **Parallel Planes:** |



**Examples:**

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| 1. Name all segments parallel to
2. Name all segments parallel to
3. Name 3 pairs of skew lines
 |  |

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|   | 1. Name another way
2. Name a pair of opposite rays with E as an endpoint
3. Are and the same segment?
 |

**1-5: Measuring Segments**

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| **Ruler Postulate:** | **Segment Addition Postulate:** | **Midpoint:** |

**Examples:**

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|  | 2. Segment AB = 25. Find the value of x if AN = 2x-6 and NB = x+7. Then find AN and NB  |
| 3. Segment EG = 100. Find the value of x if EF = 4x-20 and FG = 2x+30  | 4. If M is the midpoint of . Find RM, MT, and RT if RM = 5x+9 and MT = 8x-36 |
| 5. Suppose that T is the midpoint of segment XZ. If XT = 2x+11 and XZ = 5x+8, find x.  | 6. **CHALLENGE!!**Write an algebraic expression that represents GKIf GK = 30, find GH and JK |

**1-6: Measuring Angles**

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| **Angle:** | **Classifying Angles:**Acute:Right:Obtuse:Straight: | **Angle Addition Postulate:** |
| **Vertical Angles:** | **Adjacent Angles:** | **Complementary Angles:** |
| **Supplementary Angles:** |  |  |

**Examples:**

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| --- | --- |
| **1.** Using the picture at the right, name the following:-Set of Adjacent Angles -Complimentary Angles-A right angle -Supplementary Angles-An acute angle -A straight angle-An obtuse angle |  |

|  |  |
| --- | --- |
| **2.** Solve for x and find the measures of the angles. | **3.** Solve for x and find the measures of the angles. |
| **4.**  Use the figure at the right and name the following:  -A set of vertical angles-Adjacent angles-Complementary Angles-Supplementary Angles-Obtuse Angle |  |

**1-8: The Coordinate Plane**

On a Coordinate Plane, label the following:

-Origin

-Ordered pair

-x-axis

-y-axis

-Quadrants

|  |  |
| --- | --- |
| **Distance Formula:** | **Midpoint Formula:** |

**Examples:**

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| --- | --- |
| 1. Find the distance between R(-2,6) and S(6, -2) to the nearest tenth. | 2. Find the distance between A(1,-3) and B(-4,4) to the nearest tenth. |
| 3. On a coordinate grid, Kim’s house is 4 blocks north and 3 blocks west of the (0,0) point. Her friend Sam lives 6 blocks south and 2 blocks east. How far apart are their homes? | 4. Find the midpoint of (8,9) and (-6,-3) |
| 5. The midpoint of segment DG is M(-1,5). One endpoint is D(1,4). Find the coordinate of the other endpoint G. | 6. The midpoint of segment XY is M(4,-6). X has coordinates (2,-3). Find the coordinates of Y. |