Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CC GEOMETRY TROICI

**STATION 1: DIRECTED LINE SEGMENTS**

**)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. What are the coordinates of the point on the directed line segment from  to  that partitions the segment into a ratio of 3 to 2?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | | 2. Point *P* is on the directed line segment from point  to point  and divides the segment in the ratio . What are the coordinates of point *P*?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | |
| 3. The endpoints of  are  and . Determine and state the coordinates of point *E*, if . | 4. Point *P* is on segment *AB* such that  is . If *A* has coordinates , and *B* has coordinates , determine and state the coordinates of *P*. |

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**STATION 2: ANGLES FORMED BY PARALLEL LINES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Transversal  intersects  and , as shown in the diagram below.     Which statement could always be used to prove ?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) | and  are supplementary | | 4) | and  are supplementary | | 1. Based on the diagram below, which statement is true?      |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | |
| 1. In the diagram below, transversal  intersects  and  at *V* and *W*, respectively.     If  and , for which value of *x* is ?   |  |  | | --- | --- | | 1) | 6 | | 2) | 16 | | 3) | 24 | | 4) | 28 | | 1. As shown in the diagram below, lines *m* and *n* are cut by transversal *p*.     If  and , lines *m* and *n* are parallel when *x* equals   |  |  | | --- | --- | | 1) | 1 | | 2) | 6 | | 3) | 13 | | 4) | 17 | |

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**STATION 3: EQUATIONS OF PARALLEL LINES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Line *m* and point *P* are shown in the graph below.     Which equation represents the line passing through *P* and parallel to line *m*?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | | 2. What is the equation of a line passing through  and parallel to the line represented by the equation ?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | |
| 3. Segment *RS* is parallel to segment *TU*. If the slope of  and the slope of , the value of *x* is   |  |  | | --- | --- | | 1) | 20 | | 2) | 15 | | 3) | 10 | | 4) | 5 | | 4. Which equation represents a line parallel to the *x*-axis?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | |

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**STATION 4: EQUATIONS OF PERPENDICULAR LINES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. What is an equation of the line that passes through the point  and is perpendicular to the line whose equation is ?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | | 2. What is an equation of the line that contains the point  and is perpendicular to the line whose equation is ?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | |
| 3. What is an equation of the line that is perpendicular to the line whose equation is  and that passes through the point ?   |  |  | | --- | --- | | 1) |  | | 2) |  | | 3) |  | | 4) |  | | 1. Find an equation of the line passing through the point  and perpendicular to the line whose equation is . |

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**STATION 5: UNKOWN ANGLES**

**Find the measure of all the missing angles.**



**1. 2. 3.**

a = \_\_\_\_\_ a = \_\_\_\_\_ a = \_\_\_\_\_

b = \_\_\_\_\_ b = \_\_\_\_\_

c = \_\_\_\_\_ c = \_\_\_\_\_

d = \_\_\_\_\_





**4. 5. 6.**

a = \_\_\_\_\_ a = \_\_\_\_\_ a = \_\_\_\_\_

b = \_\_\_\_\_ b = \_\_\_\_\_ b = \_\_\_\_\_

c = \_\_\_\_\_ c = \_\_\_\_\_ c = \_\_\_\_\_

d = \_\_\_\_\_ d = \_\_\_\_\_

e = \_\_\_\_\_ e = \_\_\_\_\_