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CC GEOMETRY TROICI

**STATION 1: DIRECTED LINE SEGMENTS**

$(x\_{1}+k\left(RUN\right), y\_{1}+k(RISE)$**)**

$$(x\_{1},y\_{1})=Coordinates ofFIRST point$$

$$k=\frac{FIRST \# of ratio}{TOTAL parts}$$

$$\frac{RISE}{RUN}=\frac{Y\_{2}-Y\_{1}}{X\_{2}-X\_{1}}$$

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  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 = \_\_\_\_\_