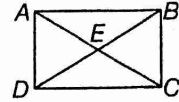


Day 03

Skills Practice

Rectangles

ALGEBRA Quadrilateral $ABCD$ is a rectangle.

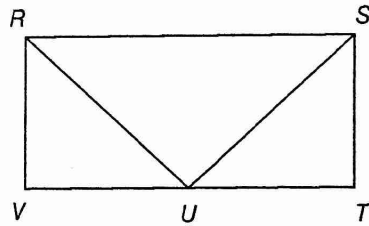


1. If $AC = 2x + 13$ and $DB = 4x - 1$, find DB .
2. If $AC = x + 3$ and $DB = 3x - 19$, find AC .
3. If $AE = 3x + 3$ and $EC = 5x - 15$, find AC .
4. If $DE = 6x - 7$ and $AE = 4x + 9$, find DB .
5. If $m\angle DAC = 2x + 4$ and $m\angle BAC = 3x + 1$, find $m\angle BAC$.
6. If $m\angle BDC = 7x + 1$ and $m\angle ADB = 9x - 7$, find $m\angle BDC$.
7. If $m\angle ABD = 7x - 31$ and $m\angle CDB = 4x + 5$, find $m\angle ABD$.
8. If $m\angle BAC = x + 3$ and $m\angle CAD = x + 15$, find $m\angle BAC$.

9. **PROOF:** Write a two-column proof.

Given: $RSTV$ is a rectangle and U is the midpoint of \overline{VT} .

Prove: $\triangle RUV \cong \triangle SUT$



Statements	Reasons

COORDINATE GEOMETRY Graph each quadrilateral with the given vertices. Determine whether the figure is a rectangle. Justify your answer using the indicated formula.

10. $P(-3, -2)$, $Q(-4, 2)$, $R(2, 4)$, $S(3, 0)$; Slope Formula
11. $J(-6, 3)$, $K(0, 6)$, $L(2, 2)$, $M(-4, -1)$; Distance Formula
12. $T(4, 1)$, $U(3, -1)$, $X(-3, 2)$, $Y(-2, 4)$; Distance Formula

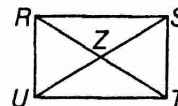
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Day 03 Practice

Rectangles

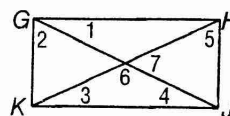
ALGEBRA Quadrilateral $RSTU$ is a rectangle.

1. If $UZ = x + 21$ and $ZS = 3x - 15$, find US .
2. If $RZ = 3x + 8$ and $ZS = 6x - 28$, find UZ .
3. If $RT = 5x + 8$ and $RZ = 4x + 1$, find ZT .
4. If $m\angle SUT = 3x + 6$ and $m\angle RUS = 5x - 4$, find $m\angle SUT$.
5. If $m\angle SRT = x + 9$ and $m\angle UTR = 2x - 44$, find $m\angle UTR$.
6. If $m\angle RSU = x + 41$ and $m\angle TUS = 3x + 9$, find $m\angle RSU$.



Quadrilateral $GHJK$ is a rectangle. Find each measure if $m\angle 1 = 37$.

- | | |
|-----------------|-----------------|
| 7. $m\angle 2$ | 8. $m\angle 3$ |
| 9. $m\angle 4$ | 10. $m\angle 5$ |
| 11. $m\angle 6$ | 12. $m\angle 7$ |



COORDINATE GEOMETRY Graph each quadrilateral with the given vertices. Determine whether the figure is a rectangle. Justify your answer using the indicated formula.

13. $B(-4, 3), G(-2, 4), H(1, -2), L(-1, -3)$; Slope Formula
14. $N(-4, 5), O(6, 0), P(3, -6), Q(-7, -1)$; Distance Formula
15. $C(0, 5), D(4, 7), E(5, 4), F(1, 2)$; Slope Formula

16. LANDSCAPING Huntington Park officials approved a rectangular plot of land for a Japanese Zen garden. Is it sufficient to know that opposite sides of the garden plot are congruent and parallel to determine that the garden plot is rectangular? Explain.