

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

Date \_\_\_\_\_

**Topic : Coordinate Geometry Proofs - Worksheet 1**

- 1. Prove that  $A(-4,-2)$ ,  $B(2,-2)$ ,  $C(4,3)$  and  $D(-2,3)$  is a rhombus using midpoints.**
- 2. Prove that  $A(-3,-4)$ ,  $B(-2,2)$ ,  $C(3,4)$  and  $D(2,-2)$  is a rhombus.**
- 3. Prove that  $A(3,7)$ ,  $B(1,3)$ ,  $C(6,1)$  are the vertices of a right triangle.**
- 4. Guinevere and Lancelot see a drawing of quadrilateral  $ABCD$ ,  $A(2,2)$ ,  $B(5,-2)$ ,  $C(9,1)$  and  $D(6,5)$ . Guinevere says the figure is a rhombus, but not a square. Lancelot says the figure is a square. Write a proof to show who is making the correct observation.**
- 5. Prove that quadrilateral  $A(1,2)$ ,  $B(2,5)$ ,  $C(5,7)$  and  $D(4,4)$  is a rhombus by using slopes.**
- 6. Prove that  $H(2,2)$ ,  $I(3,6)$ ,  $J(5,5)$  are the vertices of a right triangle.**
- 7. Prove that quadrilateral  $L(3,-3)$ ,  $M(-2,2)$ ,  $N(3,6)$  and  $O(8,2)$  is a trapezoid.**
- 8. Prove that  $I(-9,-2)$ ,  $J(-7,3)$ ,  $K(-1,3)$  and  $L(-3,-2)$  is a rhombus using midpoints.**
- 9. Prove that  $A(-4,3)$ ,  $B(3,7)$ ,  $C(3,8)$  and  $D(2,4)$  is a rhombus.**
- 10. Prove that  $J(2,-1)$ ,  $K(3,8)$ ,  $L(-2,3)$  is an isosceles right triangle.**



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**Topic : Coordinate Geometry Proofs - Worksheet 2**

- 1. Prove that  $A(-9,-7)$ ,  $B(-3,-7)$ ,  $C(-1,-2)$  and  $D(-7,-2)$  is a rhombus using midpoints.**
- 2. Prove that  $A(-3,-10)$ ,  $B(-2,-4)$ ,  $C(3,-2)$  and  $D(2,-8)$  is a rhombus.**
- 3. Prove that  $A(-4,6)$ ,  $B(-6,2)$ ,  $C(-1,0)$  are the vertices of a right triangle.**
- 4. Andrew and Thomas see a drawing of quadrilateral  $ABCD$ ,  $A(-5,1)$ ,  $B(-1,4)$ ,  $C(-4,9)$  and  $D(-8,6)$ . Andrew says the figure is a rhombus, but not a square. Thomas says the figure is a square. Write a proof to show who is making the correct observation.**
- 5. Prove that quadrilateral  $A(-2,-8)$ ,  $B(-1,-5)$ ,  $C(2,-3)$  and  $D(1,-6)$  is a rhombus by using slopes.**
- 6. Prove that  $H(2,1)$ ,  $I(3,6)$ ,  $J(7,6)$  are the vertices of a right triangle.**
- 7. Prove that quadrilateral  $L(3,-2)$ ,  $M(-1,2)$ ,  $N(3,6)$  and  $O(7,2)$  is a trapezoid.**
- 8. Prove that  $I(2,8)$ ,  $J(4,-3)$ ,  $K(10,-3)$  and  $L(8,-8)$  is a rhombus using midpoints.**
- 9. Prove that  $A(-8,1)$ ,  $B(-7,6)$ ,  $C(-2,3)$  and  $D(-3,-2)$  is a rhombus.**
- 10. Prove that  $J(2,-1)$ ,  $K(3,8)$ ,  $L(-2,3)$  is an isosceles right triangle.**



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**Topic : Coordinate Geometry Proofs - Worksheet 3**

- 1. Prove that  $A(-3,1)$ ,  $B(1,1)$ ,  $C(3,6)$  and  $D(-5,6)$  is a rhombus using midpoints.**
- 2. Prove that  $A(-4,-9)$ ,  $B(-3,-3)$ ,  $C(3,-1)$  and  $D(2,-7)$  is a rhombus.**
- 3. Prove that  $A(-5,5)$ ,  $B(-6,2)$ ,  $C(-1,2)$  are the vertices of a right triangle.**
- 4. Andrew and Thomas see a drawing of quadrilateral  $ABCD$ ,  $A(-6,3)$ ,  $B(-2,-5)$ ,  $C(-2,9)$  and  $D(-8,6)$ . Andrew says the figure is a rhombus, but not a square. Thomas says the figure is a square. Write a proof to show who is making the correct observation.**
- 5. Prove that quadrilateral  $A(-2,-8)$ ,  $B(-3,-5)$ ,  $C(2,-2)$  and  $D(2,-6)$  is a rhombus by using slopes.**
- 6. Prove that  $H(2,2)$ ,  $I(3,6)$ ,  $J(7,8)$  are the vertices of a right triangle.**
- 7. Prove that quadrilateral  $L(3,-3)$ ,  $M(-2,3)$ ,  $N(2,7)$  and  $O(6,4)$  is a trapezoid.**
- 8. Prove that  $I(2,-6)$ ,  $J(3,-3)$ ,  $K(8,-4)$  and  $L(6,-8)$  is a rhombus using midpoints.**
- 9. Prove that  $A(-8,1)$ ,  $B(-6,7)$ ,  $C(-2,5)$  and  $D(-4,-4)$  is a rhombus.**
- 10. Prove that  $A(-4,2)$ ,  $B(-1,7)$ ,  $C(-4,2)$  is an isosceles right triangle.**



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**Topic : Coordinate Geometry Proofs - Worksheet 4**

- 1. Prove that  $A(-3,-3)$ ,  $B(2,-3)$ ,  $C(3,5)$  and  $D(-2,5)$  is a rhombus using midpoints.**
- 2. Prove that  $A(-3,-3)$ ,  $B(-2,4)$ ,  $C(3,6)$  and  $D(3,-2)$  is a rhombus.**
- 3. Prove that  $A(5,8)$ ,  $B(3,4)$ ,  $C(8,3)$  are the vertices of a right triangle.**
- 4. Martin and Ricky see a drawing of quadrilateral  $ABCD$ ,  $A(1,3)$ ,  $B(4,-1)$ ,  $C(9,3)$  and  $D(6,7)$ . Martin says the figure is a rhombus, but not a square. Ricky says the figure is a square. Write a proof to show who is making the correct observation.**
- 5. Prove that quadrilateral  $A(2,2)$ ,  $B(2,6)$ ,  $C(5,7)$  and  $D(6,4)$  is a rhombus by using slopes.**
- 6. Prove that  $H(3,2)$ ,  $I(3,7)$ ,  $J(6,5)$  are the vertices of a right triangle.**
- 7. Prove that quadrilateral  $L(4,-2)$ ,  $M(-2,2)$ ,  $N(2,5)$  and  $O(7,2)$  is a trapezoid.**
- 8. Prove that  $I(-9,-3)$ ,  $J(-8,5)$ ,  $K(-4,5)$  and  $L(-4,-3)$  is a rhombus using midpoints.**
- 9. Prove that  $A(-2,3)$ ,  $B(-1,8)$ ,  $C(4,5)$  and  $D(3,0)$  is a rhombus.**
- 10. Prove that  $A(2,-3)$ ,  $B(3,8)$ ,  $C(2,-3)$  is an isosceles right triangle.**



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**Topic : Coordinate Geometry Proofs - Worksheet 5**

- 1. Prove that  $A(-3,-6)$ ,  $B(7,-2)$ ,  $C(3,6)$  and  $D(-4,2)$  is a rhombus using midpoints.**
- 2. Prove that  $A(-3,-4)$ ,  $B(-3,3)$ ,  $C(2,5)$  and  $D(3,-2)$  is a rhombus.**
- 3. Prove that  $A(1,3)$ ,  $B(1,3)$ ,  $C(7,3)$  are the vertices of a right triangle.**
- 4. Guinevere and Lancelot see a drawing of quadrilateral  $ABCD$ ,  $A(2,3)$ ,  $B(4,-3)$ ,  $C(7,2)$  and  $D(5,6)$ . Guinevere says the figure is a rhombus, but not a square. Lancelot says the figure is a square. Write a proof to show who is making the correct observation.**
- 5. Prove that quadrilateral  $A(1,2)$ ,  $B(1,7)$ ,  $C(5,5)$  and  $D(4,3)$  is a rhombus by using slopes.**
- 6. Prove that  $H(2,3)$ ,  $I(3,8)$ ,  $J(6,6)$  are the vertices of a right triangle.**
- 7. Prove that quadrilateral  $L(3,-3)$ ,  $M(-2,4)$ ,  $N(3,7)$  and  $O(6,3)$  is a trapezoid.**
- 8. Prove that  $I(-9,-3)$ ,  $J(-8,5)$ ,  $K(-3,3)$  and  $L(-5,-2)$  is a rhombus using midpoints.**
- 9. Prove that  $A(-2,3)$ ,  $B(-3,8)$ ,  $C(3,6)$  and  $D(2,2)$  is a rhombus.**
- 10. Prove that  $J(1,1)$ ,  $K(2,7)$ ,  $L(1,1)$  is an isosceles right triangle.**

