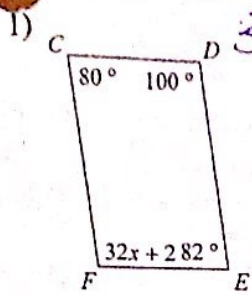


G5: B Level Test Review

1) e for x.  $32x + 2 + 82 + 80 + 100 = 360$



$$32x + 2 + 82 + 80 + 100 = 360$$

$$32x + 264 = 360$$

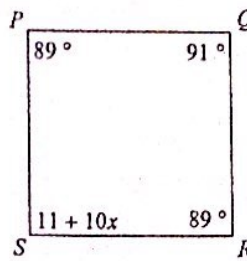
$$-264 \quad -264$$

$$32x = 96$$

$$\frac{32x}{32} = \frac{96}{32}$$

$$x = 3$$

2)  $11 + 10x + 89 + 91 + 89 = 360$



$$11 + 10x + 89 + 91 + 89 = 360$$

$$10x + 280 = 360$$

$$-280 \quad -280$$

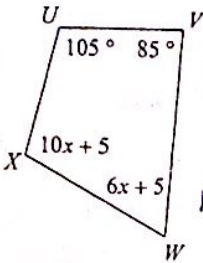
$$10x = 80$$

$$\frac{10x}{10} = \frac{80}{10}$$

$$x = 8$$

Find the measure of each angle indicated.

3)  $m\angle X = 10x + 5 + 6x + 5 + 105 + 85 = 360$



$$10x + 5 + 6x + 5 + 105 + 85 = 360$$

$$16x + 200 = 360$$

$$-200 \quad -200$$

$$16x = 160$$

$$\frac{16x}{16} = \frac{160}{16}$$

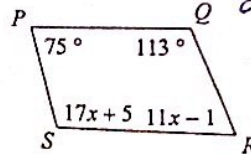
$$x = 10$$

$$m\angle X = 10x + 5$$

$$= 10(10) + 5$$

$$= 105$$

4)  $m\angle R = 17x + 5 + 11x - 1 + 75 + 113 = 360$



$$17x + 5 + 11x - 1 + 75 + 113 = 360$$

$$28x + 192 = 360$$

$$-192 \quad -192$$

$$28x = 168$$

$$\frac{28x}{28} = \frac{168}{28}$$

$$x = 6$$

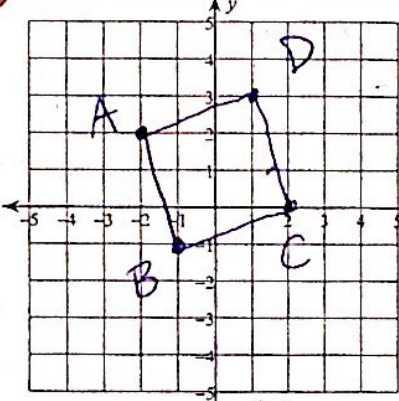
$$m\angle R = 11x - 1$$

$$= 11(6) - 1$$

$$= 65$$

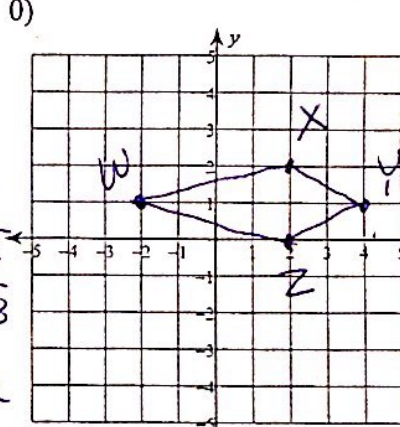
Plot and connect the points. Then state what type of quadrilateral it is and how you know.

5) Plot A(-2, 2) B(-1, -1) C(2, 0) and D(1, 3)



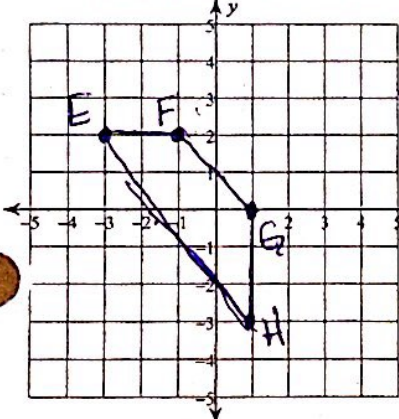
$m\angle A$   
 slope of  $\overline{AD} = \frac{3}{3} = 1$   
 slope of  $\overline{DC} = \frac{0-3}{2-1} = -3$   
 this means  
 $\overline{AD} \perp \overline{DC}$   
 same for  $\overline{AB} + \overline{BC}$   
 $\overline{AD} = \overline{DC} = \overline{BC} = \overline{AB}$   
 they all =  $\sqrt{10}$

6) Plot points W(-2, 1) X(2, 2) Y(4, 1) & Z(2, -1)



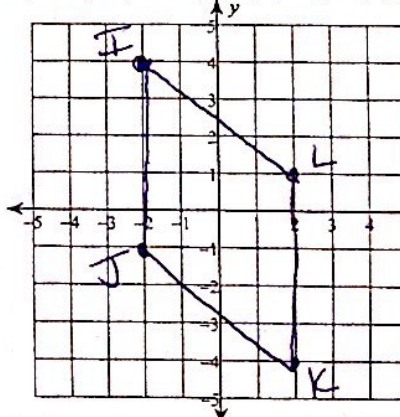
$\overline{XY} = \sqrt{1^2 + 2^2} = \sqrt{5}$   
 $\overline{YZ} = \sqrt{1^2 + 2^2} = \sqrt{5}$   
 $\overline{XW} = \sqrt{1^2 + 4^2} = \sqrt{17}$   
 $\overline{WZ} = \sqrt{1^2 + 4^2} = \sqrt{17}$   
 this is a kite because it has 2 pairs of adjacent  $\cong$  sides

7) E(-3, 2), F(-1, 2), G(1, 0) and H(1, -3)



slope of  $\overline{FG}$  is -1  
 slope of  $\overline{EH}$  is  $-\frac{5}{4}$   
 so this is just a quadrilateral because  $\overline{FG}$  and  $\overline{EH}$  are not parallel

8) I(-2, 4), J(-2, -1), K(2, -4), L(2, 1)

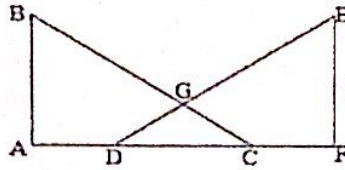


$\overline{IJ} = \overline{KL} = 5$  (counting)  
 $\overline{IL} = \overline{JK} = \sqrt{3^2 + 4^2} = 5$   
 since all sides are congruent, this is a rhombus

Complete the following proofs using a flowchart or two-column proof.

9. Given:  $\overline{DG} \cong \overline{CG}$   
 $\overline{AD} \cong \overline{FC}$   
 $\overline{BC} \cong \overline{EB}$

Prove:  $\angle B \cong \angle E$

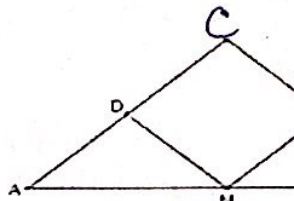


- 1)  $\overline{DG} \cong \overline{CG}$   
 2)  $\triangle GDC$  is isosceles  
 3)  $\angle GCD \cong \angle GDC$   
 4)  $\overline{AD} \cong \overline{FC}$   
 5)  $\overline{DC} \cong \overline{DC}$   
 6)  $\overline{AC} \cong \overline{DF}$   
 7)  $\overline{DC} \cong \overline{ED}$   
 8)  $\triangle BAC \cong \triangle EFD$   
 9)  $\angle B \cong \angle E$

- 1) Given  
 2) Def. of isosceles  $\triangle$   
 3) base  $\angle$ s in an isosceles  $\triangle$  are  $\cong$   
 4) Given  
 5) Reflexive Prop.  
 6)  $\overline{AD} + \overline{DC} \cong \overline{CF} + \overline{DC}$  by #4 and #5  
 7) Given  
 8) SAS  $\cong$  (#3, #6, #7)  
 9) CPCTC

10. Given: Isosceles triangle ABC with base  $\overline{AB}$   
 M is the midpoint of  $\overline{AB}$   
 $\overline{AD} \cong \overline{BE}$

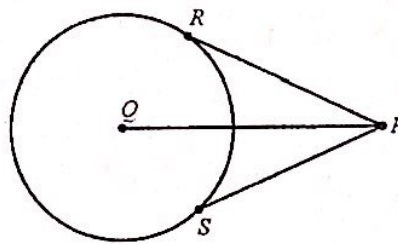
Prove:  $\overline{DM} \cong \overline{ME}$



- 1)  $\triangle ABC$  is isosceles w/ base  $\overline{AB}$   
 2)  $\angle A \cong \angle B$   
 3) M is midpoint  $\overline{AB}$   
 4)  $\overline{AM} \cong \overline{MB}$   
 5)  $\overline{AD} \cong \overline{BE}$   
 6)  $\triangle ADM \cong \triangle BEM$   
 7)  $\overline{DM} \cong \overline{ME}$

- 1) Given  
 2) Def. of isosceles  $\triangle$   
 3) Given  
 4) Def. of midpoint  
 5) Given  
 6) SAS  $\cong$  (#2, #4, #5)  
 7) CPCTC

11. Given:  $\odot Q$ ,  $\overline{RP} \cong \overline{SP}$   
 Prove:  $\overline{PQ}$  bisects  $\angle RPS$



Statement      Reasons

- 1)  $\overline{RP} \cong \overline{SP}$  1) Given  
 2) Q is the center of the circle 2) Given  
 3)  $\overline{QR}$  is a radius 3) Def. of radius  
 4)  $\overline{QS}$  is a radius 4) Def. of radius  
 5)  $\overline{QR} \cong \overline{QS}$  5) All radii in a circle are  $\cong$   
 6)  $\overline{QP} \cong \overline{QP}$  6) reflexive prop  
 7)  $\triangle QRP \cong \triangle QSP$  7) SSS  $\cong$  (#1, #5, #6)  
 8)  $\angle RPQ \cong \angle SPQ$  8) CPCTC  
 9)  $\overline{PQ}$  bisects  $\angle RPS$  9) Def. of bisect