

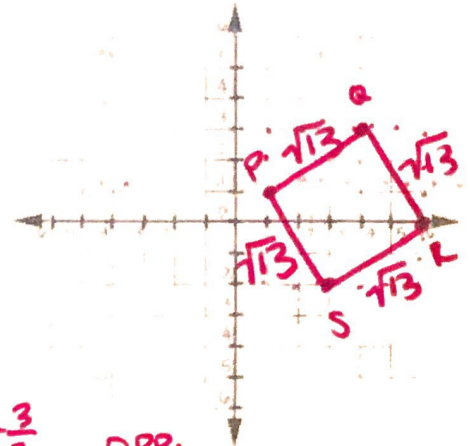
Directions: Identify the Quadrilateral PQRS, with the given points. SHOW ALL WORK!!!

1) Plot Quadrilateral PQRS: P(1, 1) Q(4, 3) R(6, 0) S(3, -2)

2) What shape does it appear to be? square

3) What do you have to show? all sides are \cong & 4 rt \angle 's.

4) Check off all that apply: length: $\overline{PQ} = \sqrt{13}$ $\overline{PS} = \sqrt{13}$
 $\overline{QR} = \sqrt{13}$ $\overline{SR} = \sqrt{13}$



SLOPES: $\overline{PQ} = \frac{2}{3}$ $\overline{PS} = -\frac{3}{2}$ OPP. rec.
 $\overline{SR} = \frac{2}{3}$ $\overline{QR} = -\frac{3}{2}$
 5) Which shape is it? square

6) Why?

all sides \cong & 4 rt \angle 's.

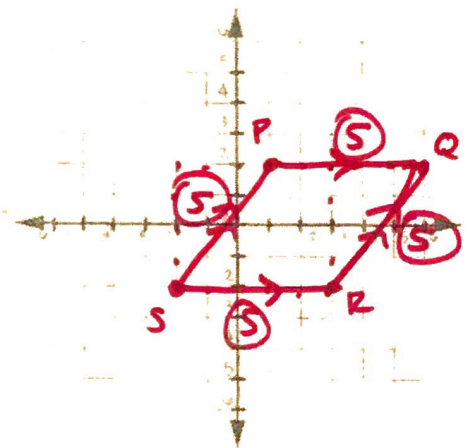
- opposite sides parallel
- consecutive sides perpendicular
- four congruent sides
- Only 1 pair of opposite sides parallel
- Congruent legs
- two pairs of congruent sides (consecutive)

7) Plot Quadrilateral PQRS: P(1, 2), Q(6, 2), R(3, -2), & S(-2, -2).

8) What shape does it appear to be? Rhombus

9) What do you have to show? OPP. sides \parallel & 4 \cong sides.

10) Check off all that apply: SLOPE of:
 $\overline{PQ} = 0$ $\overline{SR} = 0$ $\overline{SP} = \frac{4}{3}$ $\overline{RQ} = \frac{4}{3}$
all sides = 5



11) Which shape is it? rhombus

12) Why?

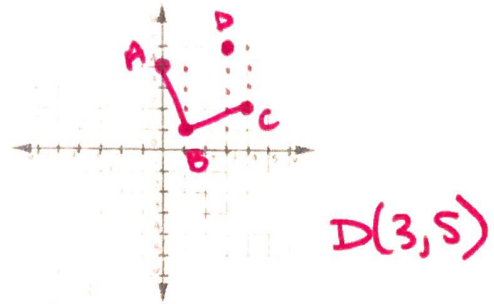
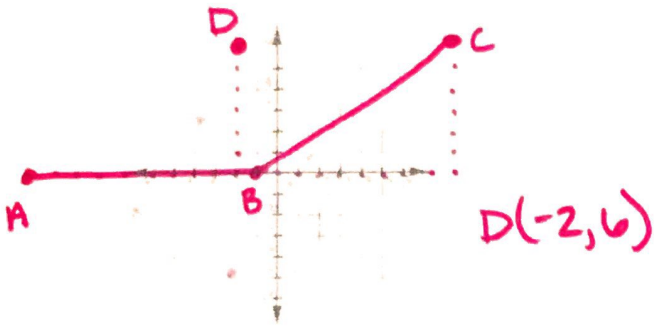
All sides \cong & OPP sides are \parallel .

- opposite sides parallel
- consecutive sides perpendicular
- four congruent sides
- Only 1 pair of opposite sides parallel
- Congruent legs
- two pairs of congruent sides (consecutive)

Directions: State the ordered pair that is needed to make the following figure.

13) Rhombi ABCD when A(-11, 0), B(-1, 0), C(8, 6)

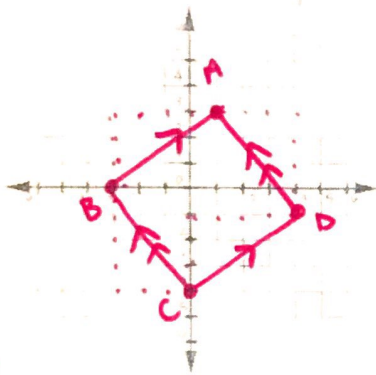
14) Square ABCD when A(0, 4), B(1, 1), C(4, 2)



Directions: Complete each proof.

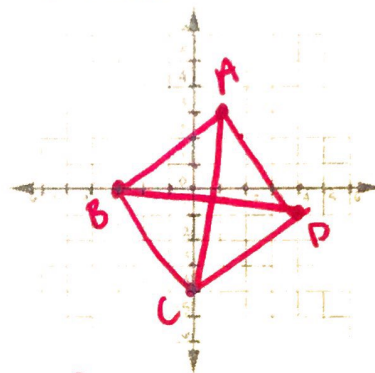
15) Prove 2 different ways that ABCD is a rhombus when A(1, 3), B(-3, 0), C(0, -4), and D(4, -1).

1st Proof:



① All sides \cong : $\overline{AB} = S$ $\overline{CD} = S$
 $\overline{BC} = S$ $\overline{AD} = S$

2nd Proof:



① opposite sides are \parallel .

② Diagonals are \perp .

slope of $\overline{AC} : \frac{7}{1}$ ✓

$\overline{BD} : -\frac{1}{7}$

② opposite sides \parallel :

slopes: $\overline{AB} : \frac{3}{4}$ $\overline{BC} : -\frac{4}{3}$

$\overline{CD} : \frac{3}{4}$ $\overline{AD} : -\frac{4}{3}$

16) Is ABCD in question #15 a square? Justify your answer with an informal proof.



- All sides are \cong

- Diagonals are \cong