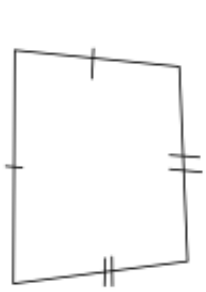
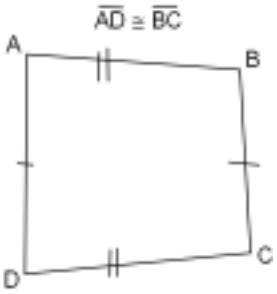
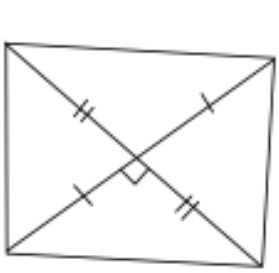
Geometry Chapter 6 Spring 2014

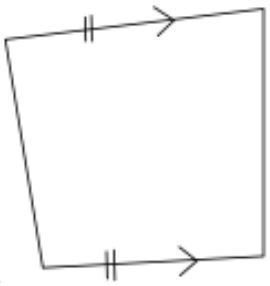
1. Give the best name for each quadrilateral. Choose from Parallelogram, Rhombus, Rectangle, Square, Kite, Trapezoid, Isosceles Trapezoid, or just Quadrilateral.

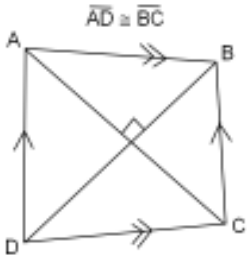
a. b. c. d. e.



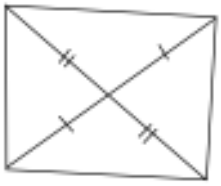


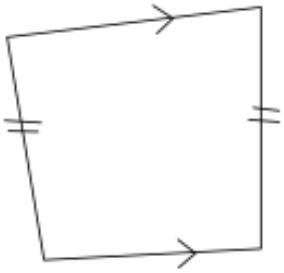


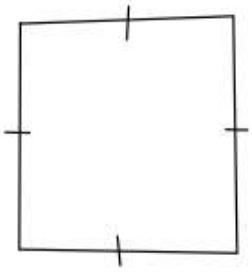


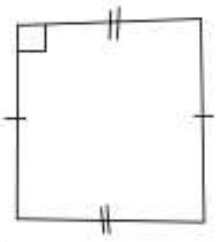


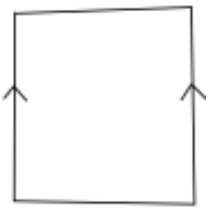
f. g. h. i. j.



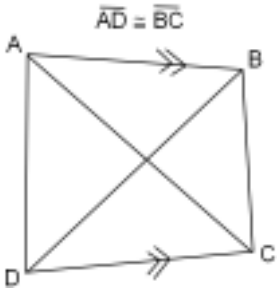


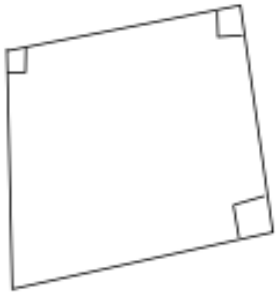


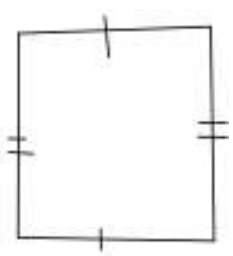


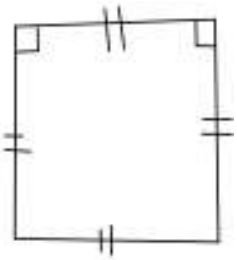


k. m. n. o.



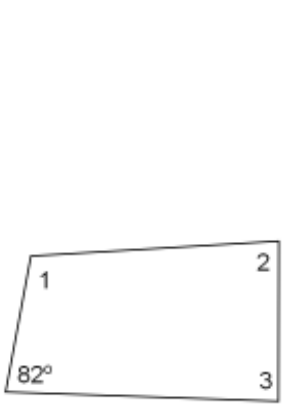


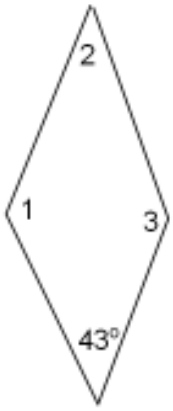


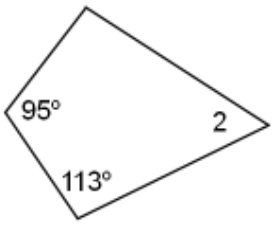


2. Find the measure of as many of the numbered angles as you can in each figure.

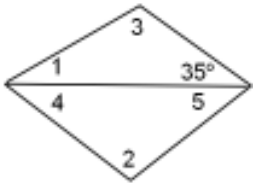
a. Parallelogram b. Rhombus c. Kite

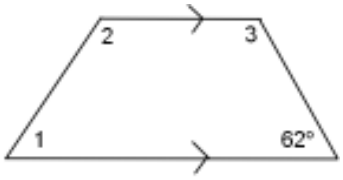


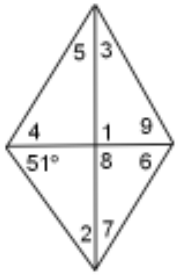




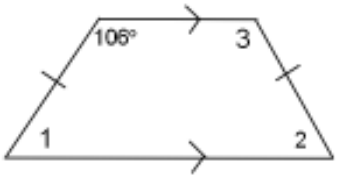
d. Rhombus e. Trapezoid. f. Rhombus

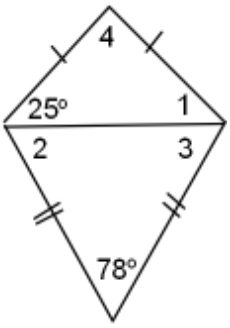


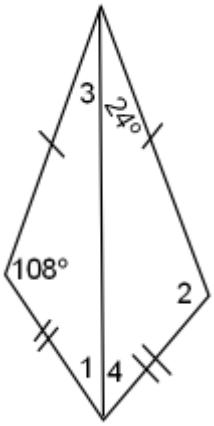




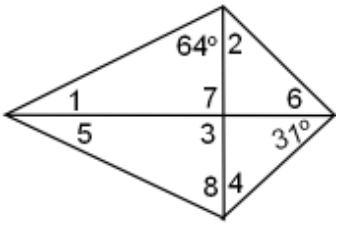
g. Isosceles Trapezoid h. Kite i. Kite







j. Kite

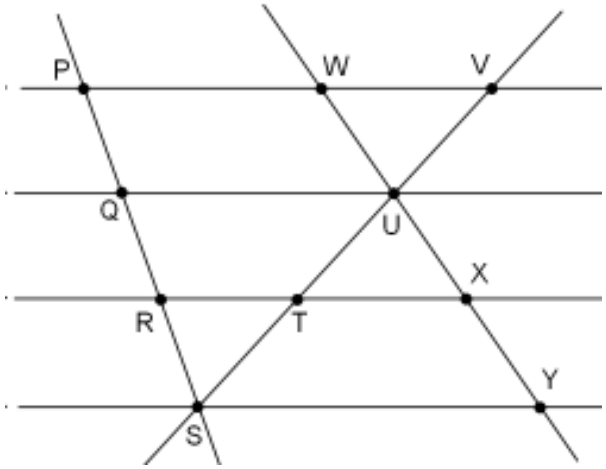


3. Given:

•The four horizontal lines are parallel

•PQ=QR=RS and WX=20, TU=11, QS =18

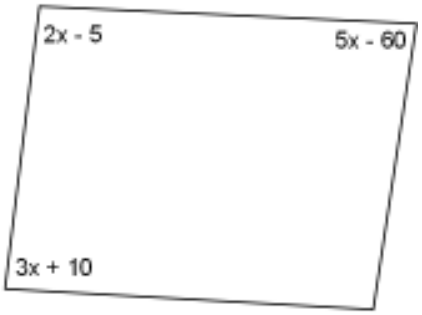
Find the given lengths. SV= PR = UX = VT = YW =



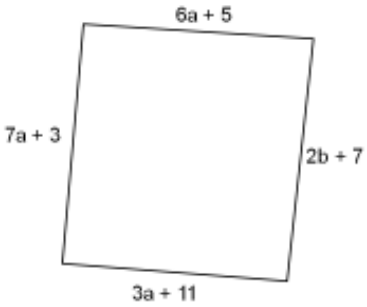
4. For what value of the variable

5. For what value of the variables

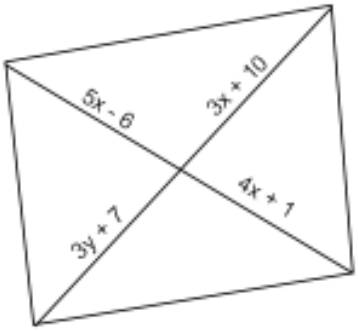
is the figure a Parallelogram?



is the figure a Rhombus?

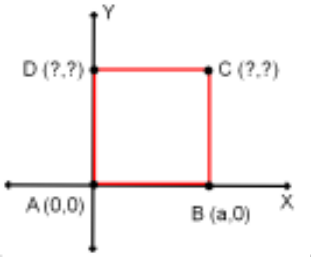


6. For what value of the variables is the figure a Parallelogram?

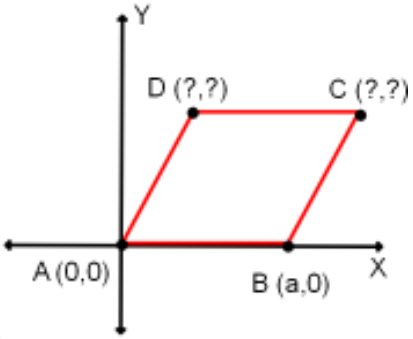


7. Use the fewest number of additional variables to state the remaining coordinates of the vertices of each quadrilateral.

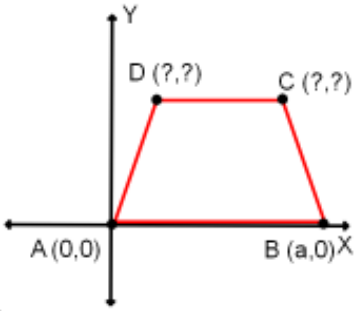
a. Square.



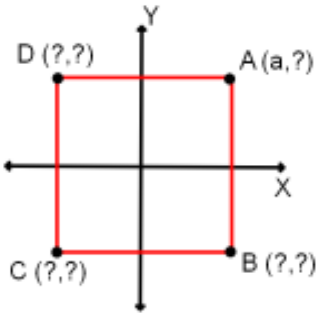
b. Parallelogram.



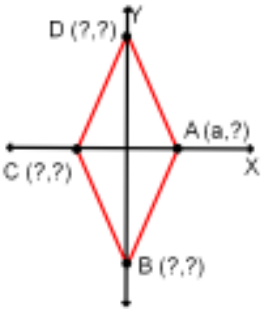
c. Isosceles Trapezoid



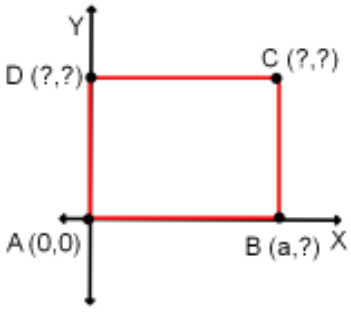
d. Square



e. Rhombus



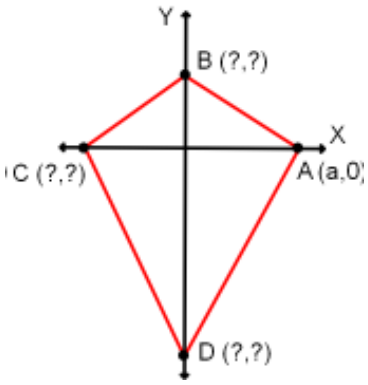
f. Rectangle

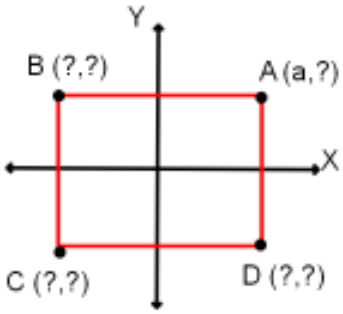


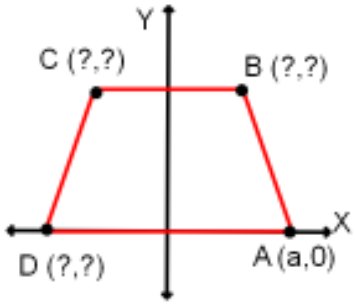
g. Kite

h. Rectangle

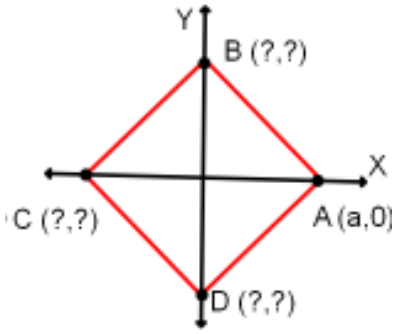
i. Isosceles Trapezoid





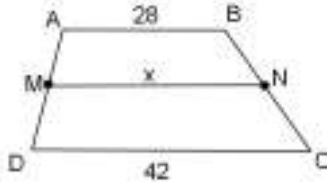


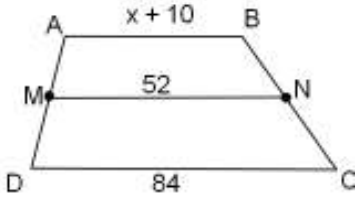
j. Square

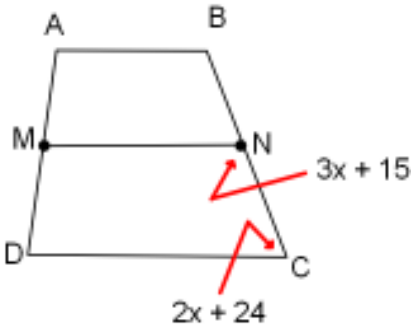


8. Each quadrilateral is a Trapezoid and points M and N are the midpoints of the legs. Find the value of x.

a. b. c.







For the remaining problems use slope, distance, midpoint and the properties of the sides and diagonals to give the BEST name for the quadrilateral. (Parallelogram, Rhombus, Rectangle, Square, or just a Quadrilateral)

9. Quad ABCD $A(2,10)$ $B(20,-2)$ $C(12,-14)$ $D(-6,-2)$
10. Quad EFGH $E(7,-5)$ $F(11,3)$ $G(3,-2)$ $H(-4,-10)$
11. Quad JKLM $J(25,-10)$ $K(-10,-5)$ $L(15,20)$ $M(50,15)$
12. Quad PQRS $P(21,-3)$ $Q(6,12)$ $R(-9,12)$ $S(0,0)$
13. Quad WXYZ $W(-12,12)$ $X(-20,-12)$ $Y(28,0)$ $Z(20,20)$
14. Quad TUVW $T(0,21)$ $U(14,-14)$ $V(-21,-28)$ $W(-35,7)$
15. Quad LMNO $L(-2,4)$ $M(8,14)$ $N(26,8)$ $O(28,-6)$

Geometry Chapter 6 ANSWERS Sring 2014

1. a) Kite b) Retangle. c) Rhombus d) Parallelogram e) Square
f) Parallelogram g) Isosceles Trapezoid h) Rhombus i) Rectangle j) Trapezoid
k) Isosceles Trapezoid m) Rectangle n) Parallelogram o) Square
2. a) $\angle 1,3 = 98°, \angle 2 = 82°$ b) $\angle 1,3 = 137°, \angle 2 = 43°$ c) $\angle 1 = 113°, \angle 2 = 39°$

d) $\angle 1,4,5 = 35, \angle 2,3 = 110°$ e) $\angle 3 = 118°$ f) $\angle 1,8 = 90°, \angle 2,3,5,7 = 39°, \angle 4,6,9 = 51°$

g) $\angle 1,2 = 74°, \angle 3 = 106°$ h) $\angle 1 = 25°, \angle 2,3 = 51°, \angle 4 = 130°$

i) $\angle 1,4 = 48°, \angle 2 = 108°, \angle 3 = 24°$

j) $\angle 1,5 = 26°, \angle 2,4 = 59°, \angle 3,7 = 90°, \angle 6 = 31°, \angle 8 = 64°$
3. SV=33, PR=18, UX=10, VT=22, YW=30 4. $x = 35$ 5. $a = 2, b = 5$ 6. $x = 7, y = 8$
7. a) $C(a,a)$ $D(0,a)$ b) $C(a+b,c)$ $D(b,c)$ c) $C(b,c)$ $D(a-b,c)$
d) $A(a,a)$ $B(a,-a)$ $C(-a,-a)$ $D(-a,a)$ e) $A(a,0)$ $B(0,-b)$ $C(-a,0)$ $D(0,b)$
f) $B(a,0)$ $C(a,b)$ $D(0,b)$ g) $B(0,b)$ $C(-a,0)$ $D(0,-c)$
h) $A(a,b)$ $B(-a,b)$ $C(-a,-b)$ $D(a,-b)$ i) $B(b,c)$ $C(-b,c)$ $D(-a,0)$
j) $B(0,a)$ $C(-a,0)$ $D(0,-a)$

8. a) $x = 35$ b) $x = 10$ c) $x = 28.2$

9. Rectangle 10. Parallelogram 11. Rhombus 12. Kite 13. Trapezoid
14. Square 15. Isosceles Trapezoid