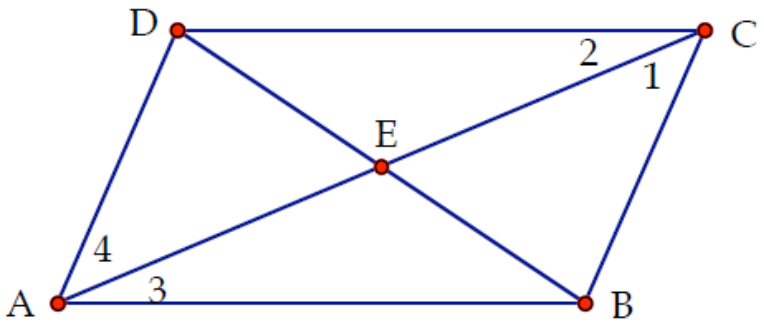
Part I

Complete each statement.

1. In a parallelogram, opposite angles are _____ .
2. In a parallelogram, opposite sides are _____ and _____ .
3. In a parallelogram, consecutive angles are _____ .
4. How many sides does every parallelogram have? _____
5. Are the diagonals congruent in a parallelogram? _____
6. In parallelogram ABCD, $\overline{AB} \cong$ _____ .
7. In parallelogram ABCD, <B is consecutive to < _____ and < _____ .
8. In parallelogram ABCD, if m<C = 47°, then m<A = _____, m<B = _____, and m<D = _____ .
9. In parallelogram ABCD if the diagonals intersect at P, then $\overline{AP} \cong$ _____ and $\overline{BP} \cong$ _____ .
10. In parallelogram ABCD, $\overline{AD} \parallel$ _____ .



Complete each statement, using the parallelogram ABCD

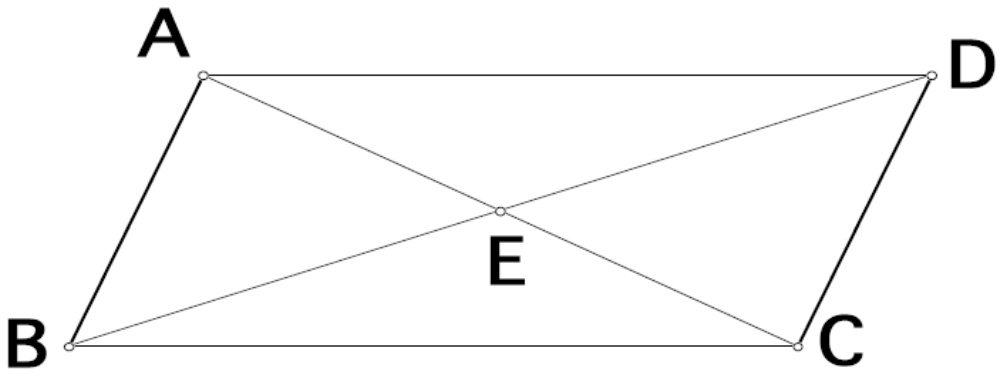
11. If AD = 20, BC = _____
12. If m<ADC = 115°, then m<ABC = _____
13. If DB = 22, then DE = _____
14. If AE = 18, then AC = _____
15. If m<DAB = 75°, m<ADC = _____
16. If m<1 = 30°, then m<4 = _____
17. If m<AED = 72°, m<DEC = _____
18. If m<ADC = 130° and m<1 = 35°, m<2 = ___

Part II

19.

Find the missing measurements of Parallelogram ABCD.

AB = 4
BC = 16
CD = _____
DA = _____
AC = 14
DB = 18
AE = _____
BE = _____
CE = _____
DE = _____

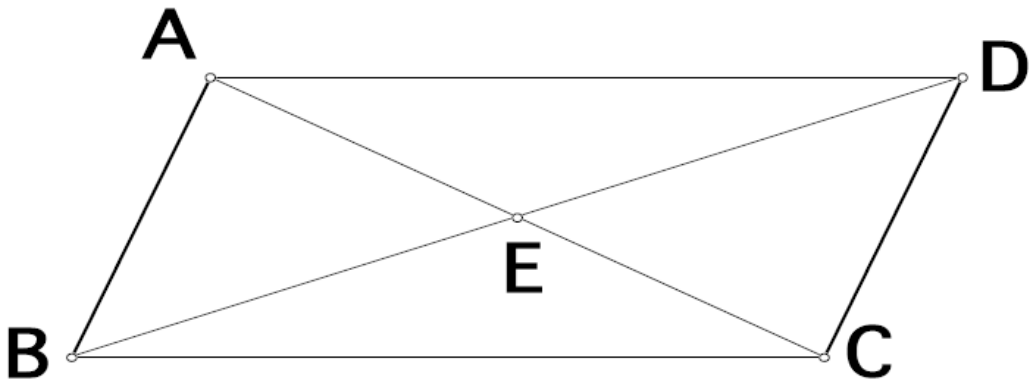


m<ABE = 38° m<EBC = 24° m<BCE = 30° m<ECD = _____
m<CDE = _____ m<EDA = _____ m<DAE = _____ m<EAB = _____
m<AEB = _____ m<BEC = _____ m<CED = _____ m<DEA = _____

20.

Find the missing measurements of Parallelogram ABCD.

AB = 10
BC = 24
CD = _____
DA = _____
AC = _____
DB = _____
AE = 12
BE = 13
CE = _____
DE = _____



m<ABE = 47° m<EBC = 27° m<BCE = _____ m<ECD = 72°
m<CDE = _____ m<EDA = _____ m<DAE = _____ m<EAB = _____
m<AEB = _____ m<BEC = _____ m<CED = _____ m<DEA = _____

Part III

21.

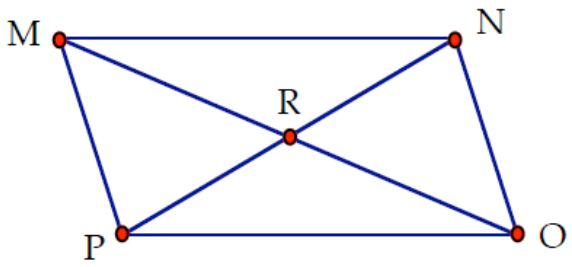
Solve for x: _____

If PR = x + 2 and

RN = 3x -10, then

x = ____, RN = ____ and PN = ____ .

equation: _____

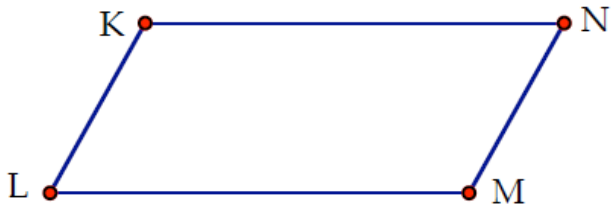


22.

If m<K = x + 3 and m<N = 2x + 6,

then m<K = ____ .

equation: _____



Use the diagram of the parallelogram to the right to answer the following questions.

23. If m<MPO = 122°, then m<PON = _____ .

24. If m<PMN = 74°, then m<NOP = _____ .

25. If m<4 = 36°, then m< _____ = 36°.

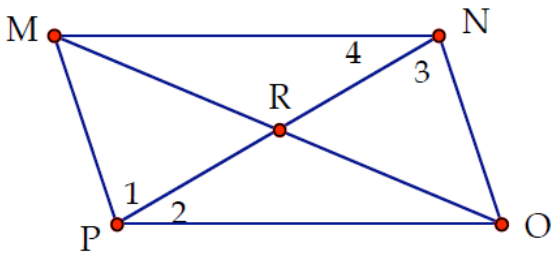
26. If m<MNO = 106° and m<4 = 47°,
then m<3 = _____ ,.

27. If NR = 3x + 2 and RP = x + 14, then
x = _____, NR = _____ and NP = _____ .

28. If MR = 2x + 4 and MO = 7x - 28, then
x = _____, RO = _____ and MO = _____ .

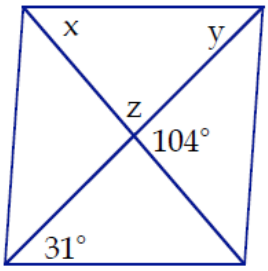
29. If m<PMN = 8x - 5 and m<PON = 4x + 19, then
x = _____, m<PMN = _____ and m<MNO = _____ .

30. If m<MPO = 9x + 2 and m<PON = 5x + 10, then
x = _____, m<MPO = _____,
m<PON = _____, and m<PMN = _____ .



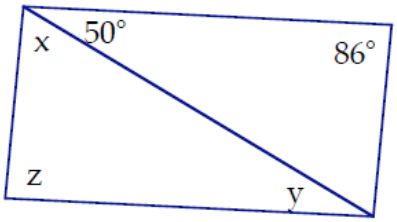
Find the values of x, y and z if each quadrilateral is a parallelogram.

31.



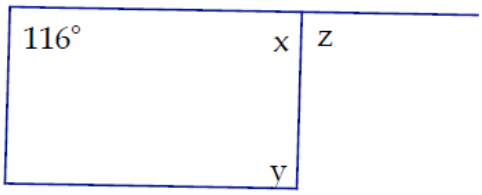
x = _____
y = _____
z = _____

32. 3



x = _____
y = _____
z = _____

33.



x = _____
y = _____
z = _____