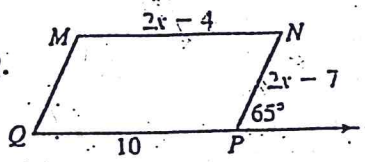
Geometry Worksheet HW#19 WRITE ON YOUR OWN PAPER!!

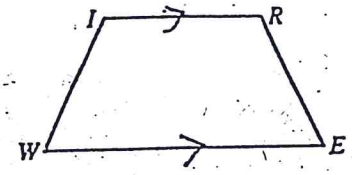
Chapter 5

MNPQ is a parallelogram.

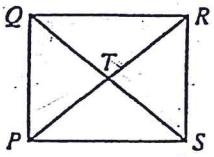


1. Find the measure of $\angle M$; $\angle N$; $\angle NPQ$; $\angle Q$.
2. Find the length of side $\overline{MN}$; $\overline{NP}$; $\overline{QM}$.

3. If $\overline{WI} \cong \overline{ER}$, $m\angle W = 2x + 55$, and $m\angle E = 7x - 15$, find x and the measures of $\angle W$ and $\angle E$.



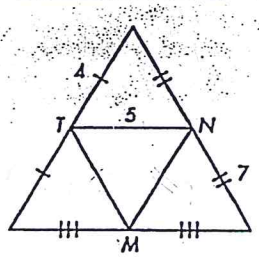
4. If *PQRS* is a rectangle with $QT = (2x + 4)$ cm and $TS = (3x - 1)$ cm, find PR.
5. If *PQRS* is a rhombus with $m\angle PQS = (3x + 10)$ and $m\angle SQR = (x + 40)$, find $m\angle QRS$.



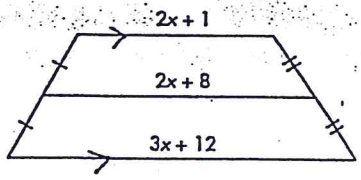
Hint: re-sketch for each problem to "look right."

6. *PQRS* is a square with $ST = (x + 8)$ cm and $PR = (4x + 6)$ cm. Find QT.

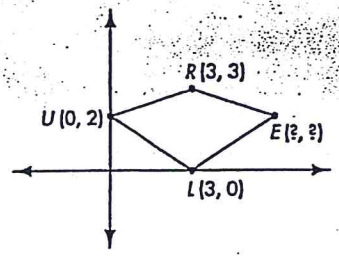
7. Perimeter of ΔNTM = _____



8. $x =$ _____

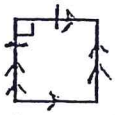


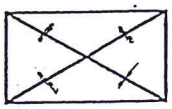
9. RULE is a kite.
What are the coordinates of point *E*? _____

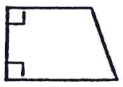


Identify each figure as a parallelogram, rectangle, rhombus, square, or none of these. Use all terms that apply.

10. 

11. 

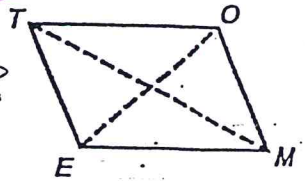
12. 

13. 

← assume other ∠'s are not 90°

parallelogram

Use the given information to classify $\square TOME$ as a rectangle, rhombus, square, or none of these. ~~Use all terms that apply.~~ What could each be? ← same thing as



14. $\overline{TO} \cong \overline{ET}$ _____

15. $\overline{EO} \perp \overline{TM}$ _____

16. $m\angle EOT = m\angle OEM$ _____

17. $\overline{EM} \perp \overline{OM}$ _____

18. $m\angle OME = 90$; $\overline{TO} \cong \overline{TE}$ _____

19. In $\square QUED$, $m\angle D$ is 30 greater than $m\angle E$. Find the measures of each of the angles.

Tell if the parallelogram ~~is a~~ must be a rectangle, rhombus, square, or none of these.
(the most specific name)

1) $\overline{AB} \cong \overline{BC}$

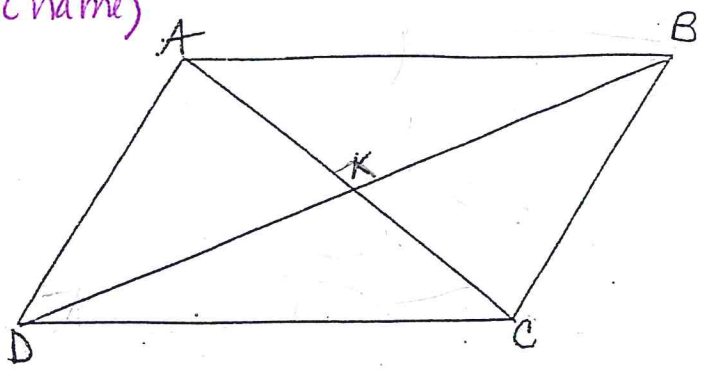
2) $\overline{AB} \cong \overline{DC}$

3) $\overline{AD} \perp \overline{DC}$

4) $\overline{AC} \cong \overline{DB}$ and $\overline{AC} \perp \overline{DB}$

5) K is the midpoint of $\overline{AC}$ and $\overline{BD}$

6) $\angle BCD \cong \angle ABC$



Are the following statements always, sometimes, or never true?

1) Opposite sides of a rectangle are parallel.

2) Diagonals of a rhombus are perpendicular.

3) Diagonals of a rhombus are congruent.

4) Opposite sides of a parallelogram are congruent.

For Questions 1-4, write the letter of every special quadrilayeral that has the given property.
(could be)

a. parallelogram	b. rectangle	c. rhombus
d. square	e. trapeziod	f. isosceles trapezoid

1. Both pairs of opposite sides parallel

2. Exactly one pair of opposite sides are parallel

3. Both pairs of opposite sides congruent

4. Diagonals bisect each other.

5. Diagonals are congruent and bisect each other.