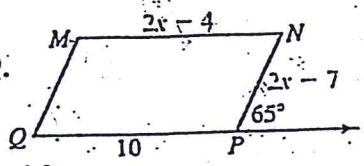
Geometry Worksheet

WRITE ON YOUR OWN PAPER!!

Chapter 5

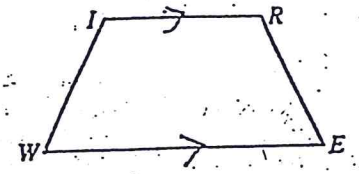
1-6, 8-13
+ textbook
p 269: 1-4, 15a,b
p 265: 13-14

MNPQ is a parallelogram.

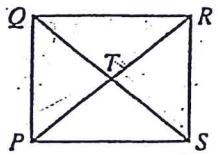


1. Find the measure of $\angle M$; $\angle N$; $\angle NPQ$; $\angle Q$.
2. Find the length of side $\overline{MN}$; $\overline{NP}$; $\overline{QM}$.

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 $\angle E$.

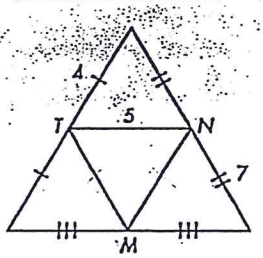


4. If *PQRS* is a rectangle with $QT = (2x + 4)$ cm and $TS = (3x - 1)$ cm, find *PR*.
5. If *PQRS* is a rhombus with $m\angle PQS = (3x + 10)$ and $m\angle SQR = (x + 40)$, find $m\angle QRS$.

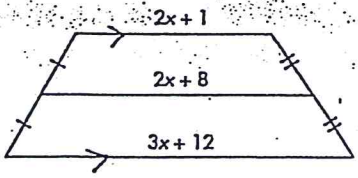


6. *PQRS* is a square with $ST = (x + 8)$ cm and $PR = (4x + 6)$ cm. Find *QT*.

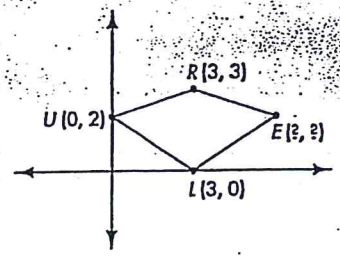
7. Perimeter of ΔNTM = _____



8. $x =$ _____

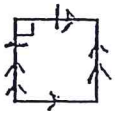


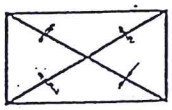
9. RULE is a kite. What are the coordinates of point *E*? _____

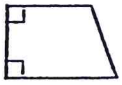


Identify each figure as a parallelogram, rectangle, rhombus, square, or none of these. Use all terms that apply.

10. 

11. 

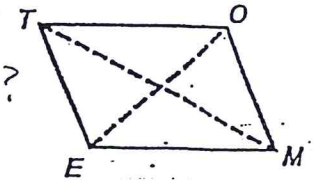
12. 

13. 

← assume other ∠'s are not 90°

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

parallelogram



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 ▱*QUED*, $m\angle D$ is 30 greater than $m\angle E$. Find the measures of each of the angles.

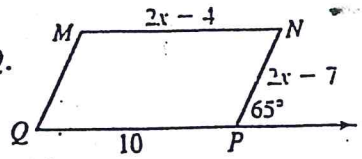
Geometry Worksheet

Chapter 4 Sections 8–11

9

Key

MNPQ is a parallelogram.



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

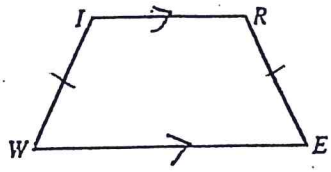
$\angle M = 115°$ $\angle N = 65°$
$\angle NPQ = 115°$ $\angle Q = 65°$
$MN = 10$ $NP = 7$ $QM = 7$

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 $\angle E$.

28

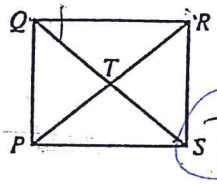
$2x + 55 = 7x - 15$
$55 = 5x - 15$
$70 = 5x$
$x = 14$

$\angle W = 2 \cdot 14 + 55 = \angle E$
$= 83$



$x = 14$
$W = 83°$
" "

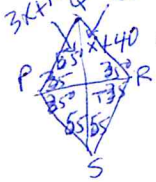
4. If $PQRS$ is a rectangle with $QT = (2x + 4)$ cm and $TS = (3x - 1)$ cm, find PR. 28



4) $2x + 4 = 3x - 1$
$5 = x$ $2(2(5)+4) = 28$

5. If $PQRS$ is a rhombus with $m\angle PQS = (3x + 10)$ and $m\angle SQR = (x + 40)$, find $m\angle QRS$. ~~110°~~ 70°

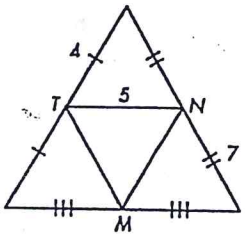
5) $3x + 10 = x + 40$
$2x = 30$
$x = 15$



6. $PQRS$ is a square with $ST = (x + 8)$ cm and $PR = (4x + 6)$ cm. Find QT. 13

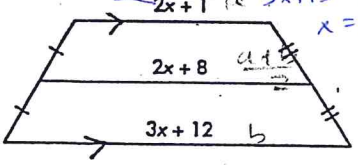
$2(x+8) = 4x + 6$
$2x + 16 = 4x + 6$
$10 = 2x$ $x = 5$
$5 + 8 = 13$

7. Perimeter of ΔNTM = 16

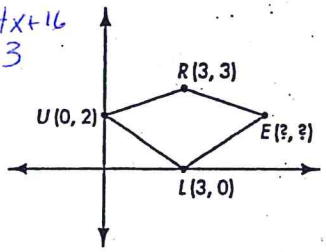


8. $x =$ 3

$\frac{2x+1+3x+12}{2} = 2x + 8$
$\cancel{2 \cdot 5x+13} = (2x+8) \cdot 2$
$5x + 13 = 4x + 16$
$x = 3$



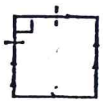
9. RULE is a kite. What are the coordinates of point E? (6, 2)

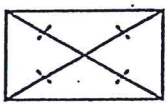


p269
1) 360° (C-32)
2) $\frac{360}{5} = 72°$
$\frac{360}{6} = 60°$
3) $\frac{360°}{24°} = 15$ sides
4) $\frac{7380}{180} = \frac{180(n-2)}{180}$
$41 = n - 2$
$n = 43$

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

10. 
parallelogram
rhombus

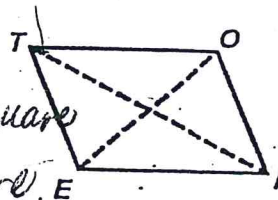
11. 
square, rect
rhombus, ||ogram

12. 
parallelogram
rectangle
square

13. 
none

15. a) dodecagon
$\frac{180(12-2)}{12} = 150°$
$\frac{1}{2}$ of $150° = 75°, 75°, 30°$

Use the given information to classify ▱$TOME$ as a rectangle, rhombus, square, or none of these. Use all terms that apply.



14. $\overline{TO} \cong \overline{ET}$ ~~rectangle~~ rhombus, square
15. $\overline{EO} \perp \overline{TM}$ rhombus, square
16. $m\angle EOT = m\angle OEM$ none of all
17. $\overline{EM} \perp \overline{OM}$ rectangle, square
18. $m\angle OME = 90$; $\overline{TO} \cong \overline{TE}$ Square, rhombus, rectangle

b) dodecagon
$\frac{180° - 150°}{2} = 15$
$150°, 15°, 15°$

19. In ▱$QUED$, $m\angle D$ is 30 greater than $m\angle E$. Find the measures of each of the angles.
$m\angle E = 75°$ $105° = m\angle D$

p265: 13) $2700 = 180(n-2)$
$15 = n - 2$
$n = 17$

14) $\frac{180(n-2)}{n} = 156$
$180n - 360 = 156n$
$-360 = -24n$
$n = 15$

or $180 - 156 = 24$
$\frac{360}{24} = 15$