Ms. Chan

Ch. 4 Pre-Test
Geometry Honors

Part B

① How many sides does a polygon have if the sum of its interior ∠s measures is 7200°?

② In which type of regular polygon does each interior ∠ measure 135°?

③ If each exterior ∠ measure of a regular polygon equals 18°, how many sides does the polygon have?

Part C

① What is the midpt. of a line segment with endpts (−8, 6) and (14, −3)?

② What is the slope of the line which is ⓐ parallel ⓑ ⊥ to the line containing the points (16, −6) and (4, −10)?

③ One diagonal of a rhombus passes through (−5, −8) and (8, −12). Find the slope of the other diagonal.

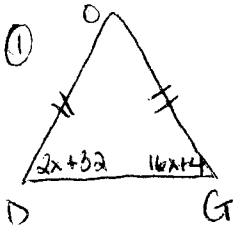
* Determine whether the lines are parallel, ⊥, or neither based on 2 pts. on the line: ($\overleftrightarrow{AB}$, $\overleftrightarrow{CD}$)

A(10, 3) C(7, 12)
B(14, 6) D(3, 15)

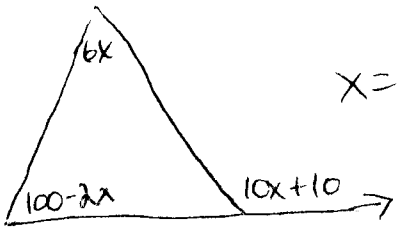
Problems 4, 5, 6

③ An isosceles △ has a base length of 70. What is the shortest possible integer length of each of the other sides?

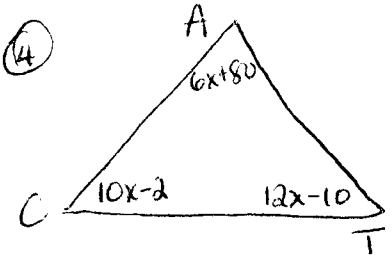
Part F

① 

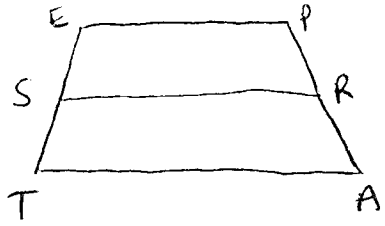
Find m∠O.

② 

x = ?

④ 

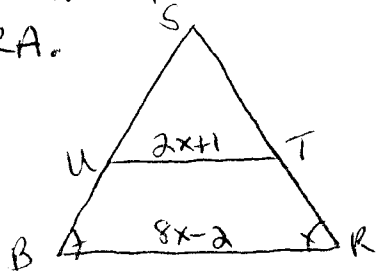
Oops! * TAPE is an isosceles trapezoid with bases $\overline{TA}$ and $\overline{PE}$.



(5) $EP = 18.3$
$SR = 26.4$
Find TA.

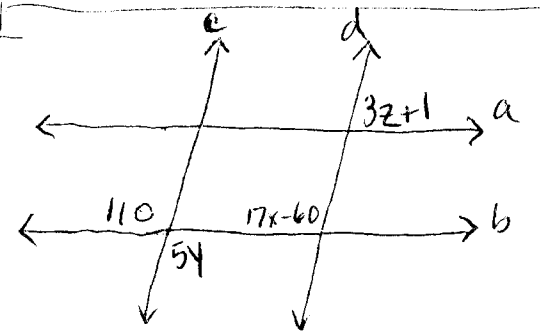
(6) $\overline{TA} + \overline{PE} = 12x+2$
$SR = 18x+10$
Find x.

(7) $\triangle BSR$ is isos. w/ $\overline{UT}$ midsegment. If perimeter $\triangle BSR = 50$, find the perimeter of trapezoid TSRA.



Oops!
(8) In parallelogram BACI,
$BA = 8x+4y$, $CI = 6x+y+18$,
$BI = 10x+3y$, $AC = 7x+6y-9$
(8) Find BA (9) Find AC.

In parallelogram CHAN,
$m\angle C = 3x+6$, $m\angle H = 8y-7$,
$m\angle A = 4y-5$, $m\angle N = 7x+14$,
(10) Find x (11) Find y.

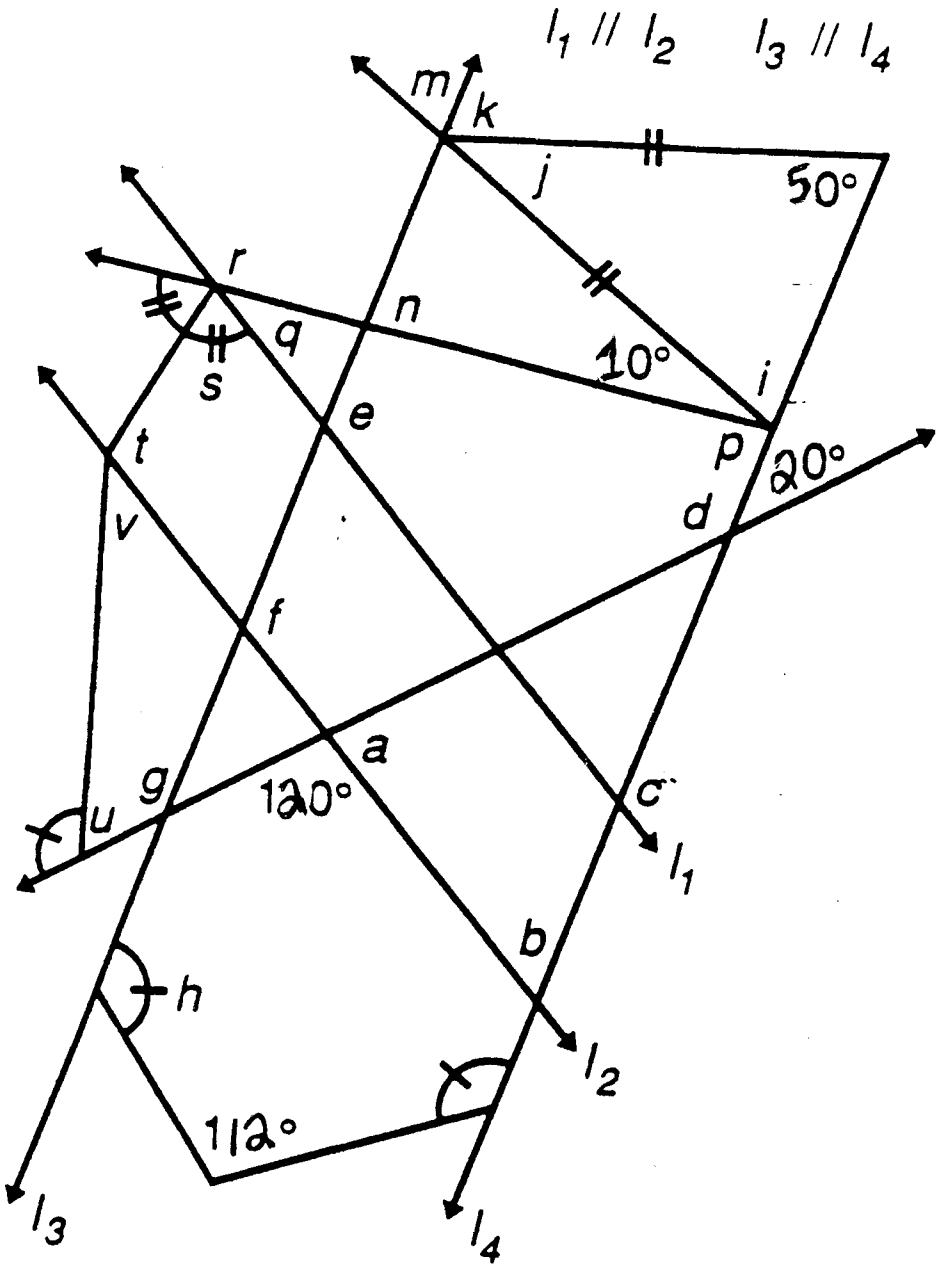


$a \parallel b$
$c \parallel d$

(12) $x = ?$
(13) $y = ?$
(14) $z = ?$

CHAPTER 4 TEST PART D

Good Luck to _____ Period ____ Date _____



1.	a =
2.	b =
3.	c =
4.	d =
5.	e =
6.	f =
7.	g =
8.	h =
9.	i =
10.	j =
11.	k =
12.	m =
13.	n =
14.	p =
15.	q =
16.	r =
17.	s =
18.	t =
19.	u =
20.	v =

Geometry Honors

Ch.4 Pre-Test Solutions

Ms. Chien

Part B

① $180(n-2) = 7200$
$180n - 360 = 7200$
$180n = 7560$
$n = 42$

42

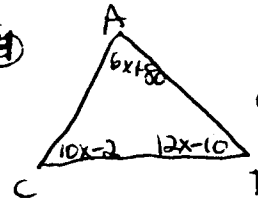
② if each int ∠ = 135
then each ext ∠ = 45
a set of ext ∠s = 360
so $360 \div 45 = 8$ sides

8

③ $360 \div 18 = 20$ sides

20

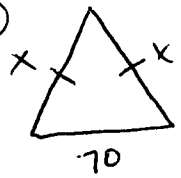
④



$x = ?$
every Δ has 180°
∴
$28x + 68 = 180$
$28x = 112$
$x = 4$

4

⑤



shortest integer length of each ≅ side?
the sum of any sides > 3rd side
∴ $2x > 70$
$x > 35$ ∴ $x = 36$

36

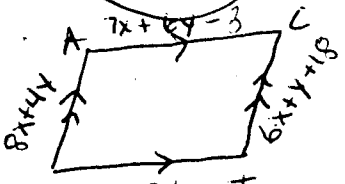
⑥ **Part C**

D midpt? $(-8, 6)$ $(14, -3)$

$\frac{-8+14}{2}, \frac{6+(-3)}{2}$

$(3, \frac{3}{2})$

⑦



opp sides of a llogram ≅
∴ $BA = CI$ & $AC = BI$
$8x+4y = 6x+y+18$; $7x+6y-9 = 10x+3y$
convert to standard form!

$2x + 3y = 18$
$3x - 3y = -3$
$5x = 15$
$x = 3$

if $x = 3$ then
$2x+3y = 18$
$2(3)+3y = 18$
$6+3y = 18$
$3y = 12$
$y = 4$

⑧ $BA = 8x + 4y$
$= 8(3) + 4(4)$
$= 24 + 16$

40

⑨ $AC = 7x + 6y - 3$
$7(3) + 6(4) - 3$
$21 + 24 - 3$

42

⑩ C ——— H
$12x+6$ $8x-7$

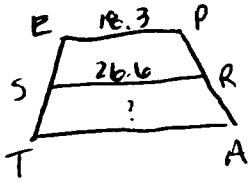
② $(16,-6)$ $(4,-10)$ $m=?$

$m=\frac{-6+10}{16-4}=\frac{4}{12}=\frac{1}{3}$

$m_{\perp}=\frac{1}{3}$

$m_{\perp}=-3$

⑤ TAPE is an isos. trap.



midsegment = half the sum of bases

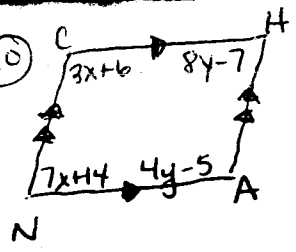
$\therefore 26.6=\frac{18.3+TA}{2}$

$53.2=18.3+TA$

$34.9=TA$

34.9

⑩



$\angle C+\angle N=180$ (SSI)

$10x+20=180$

$10x=160$

$x=16$ 16

③ $(-5,-8)$ $(8,-12)$ endpts of a diagonal

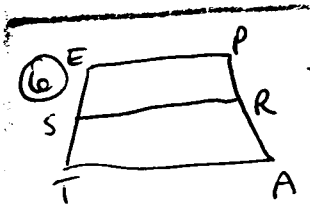
$m=\frac{-8+12}{-5-8}=\frac{4}{-13}$

$\therefore$ m of the other diagonal is opp. recip since diagonals of a rhombus are $\perp$ bisectors of e/o.

$m_{\perp}=\frac{13}{4}$

4-6 $m_{AB}=\frac{3}{4}$ $m_{CD}=\frac{-3}{4}$ $\therefore$ neither $\parallel$ or $\perp$

⑥



$TA+PE=12x+2$

$SR=18x+10$

$x=?$

$\frac{12x+2}{2}=18x+10$

$12x+2=36x+20$

$-18=24x$

$x=\frac{-18}{24}=\frac{-3}{4}$

$-\frac{3}{4}$!

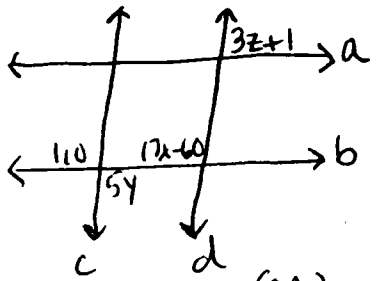
⑪ $\angle H+\angle A=180$ (SSI)

$8y-7+4y-5=180$

$12y-12=180$

$12y=192$

$y=16$ 16



⑫ $17x-60=110$ (CA)

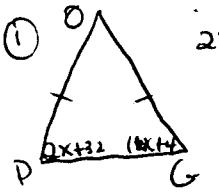
$17x=170$

$x=10$ 10

Part F

$m\angle C=?$

①



$2x+32=16x+4$

$28=14x$

$2=x$

$\therefore \angle O=2(2)+32$

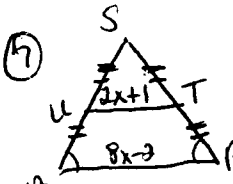
$=36$

$\therefore \angle G=36$

$\therefore \angle O=180-72$

108°

⑦



$P_{\triangle BSR}=50$

$P_{trap\ BUTR}=?$

midseg. of a $\triangle=\frac{1}{2}$(3rd side)

$2x+1=\frac{1}{2}(8x-2)$

$4x+2=8x-2$

$4=4x$

$x=1$

$\therefore BR=6$

$\therefore BS+SR=44$

$\therefore SR=22$

$\therefore TR=UB=11$

$\therefore P_{BUTR}=11+11+6+3$

31

⑬ $5y=110$ (vert. $\angle$s $\cong$)

$y=22$ 22

⑭ $3z+1=70$

$3z=69$

$z=23$ 23