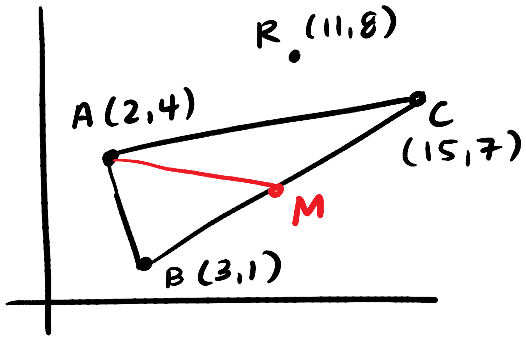
Review
pg 206: 2, 9, 17-19
pg 264: 3, 7, 9, 17, 18, 25

#2 a. $\angle C$ and $\angle ABE$

b. $\angle EBD$ and $\angle CDB$

#9



a If median from A intersects $\overline{BC}$ at M, find M

$\left(\frac{3+15}{2}, \frac{1+7}{2}\right) \Rightarrow \boxed{(9,4)}$

b Find $m_{BC} = \frac{7-1}{15-3} = \frac{6}{12} = \boxed{\frac{1}{2}}$

(3,1)
(15,7)

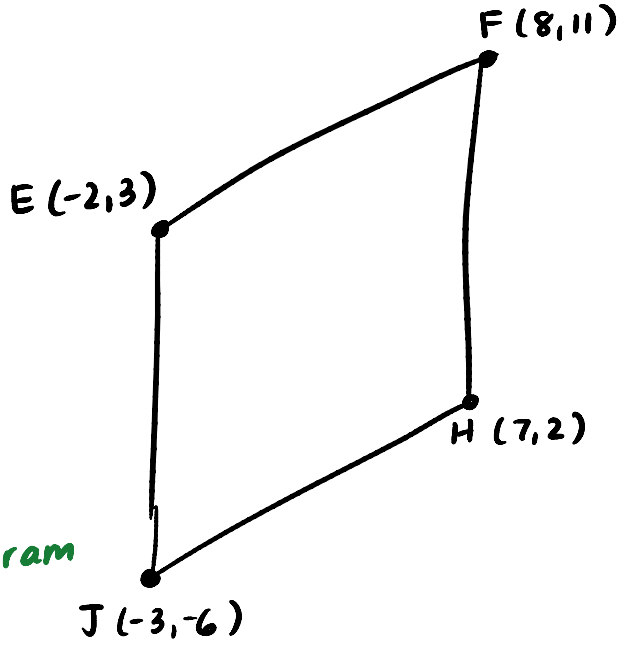
c. not $\parallel$
$m_{AR} = \frac{4}{9}$

d. Find slope of alt. from A to $\overline{BC}$

$m_{BC} = \frac{1}{2}$ $\quad \boxed{\perp m = -2}$

e. (2,4) to (9,4) is 7 units (walk from A to M)

#17

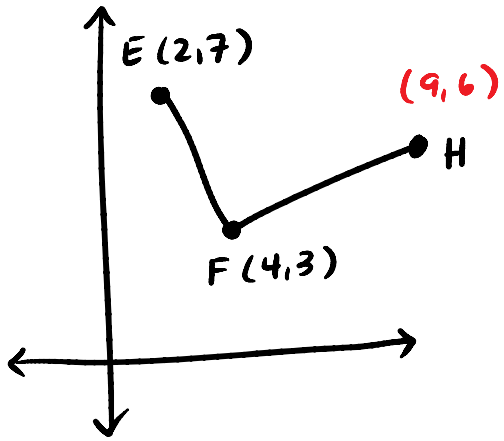


$m_{EF} = \frac{4}{5}$
$m_{JH} = \frac{4}{5}$
} parallel

$m_{EJ} = \frac{9}{1}$
$m_{FH} = \frac{9}{1}$
} parallel

If Both pairs of opposites sides are $\parallel$ → parallelogram

#18 $\angle F$ is a Right $\angle$
Explain why (9,6) could not be the coordinates of H.



$m_{EF} = \frac{7-3}{2-4} = \frac{4}{-2} = -2$

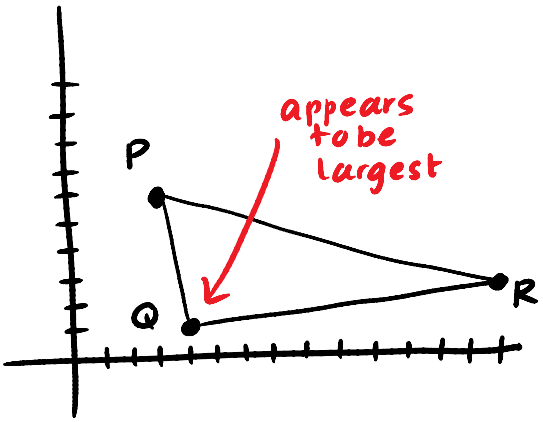
(2,7)
(4,3)

not opposite reciprocals

$m_{FH} = \frac{6-3}{9-4} = \frac{3}{5}$

(4,3)
(9,6)

#19 Given $\triangle PQR$ with $P = (3,6)$ $Q = (4,1)$ $R = (14,3)$
find the measure of the largest angle of $\triangle PQR$.



$m_{PQ} = \frac{6-1}{3-4} = \frac{5}{-1} = \boxed{-5}$

(3,6)
(4,1)

opp. reciprocals ∴ ⊥

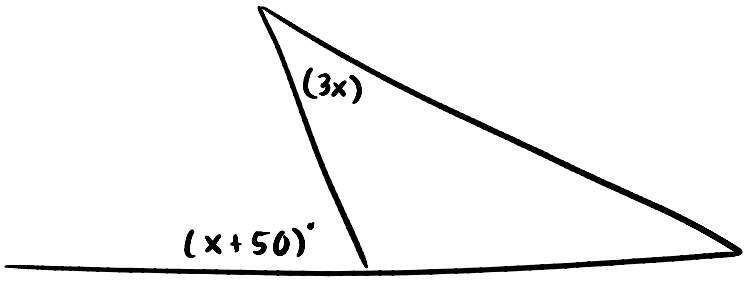
$m_{QR} = \frac{3-1}{14-4} = \frac{2}{10} = \boxed{\frac{1}{5}}$

(4,1)
(14,3)

∴ If $\overline{PQ} \perp \overline{QR} \rightarrow \angle Q$ is a right $\angle = 90°$ (the largest $\angle$)

pg. 264

#3 Write an inequality for the restrictions on x.



$3x < x+50 < 180$

$3x < x+50$
$2x < 50$
$x < 25$

$x+50 < 180$
$x < 130$

But also:

$x+50 > 0$
$x > -50$

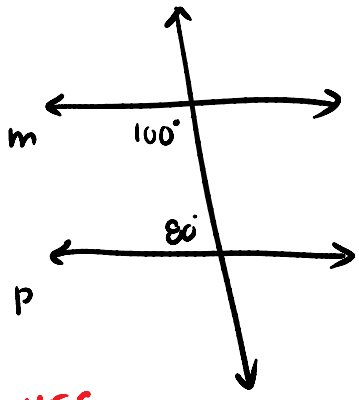
$3x > 0$
$x > 0$

Choose the greatest restrictions

$\boxed{0 < x < 25}$

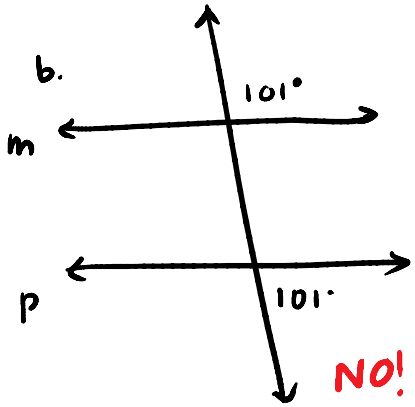
#7

a.



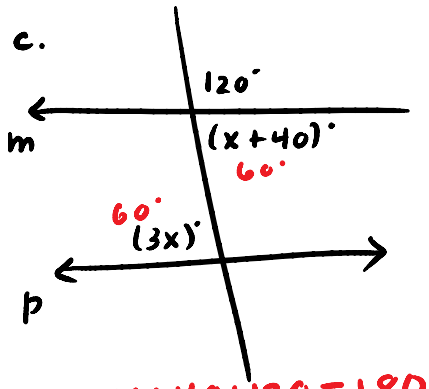
YES

b.



NO!

c.

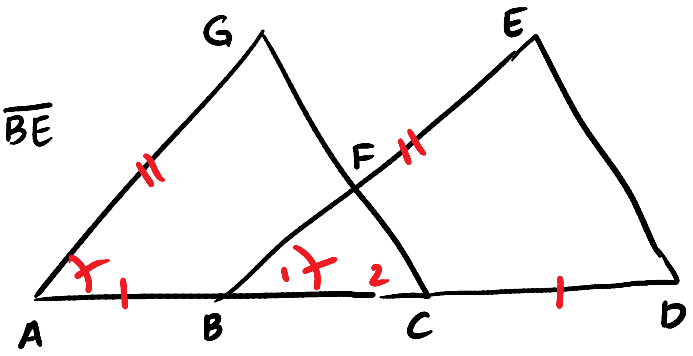


$x+40+120=180$
$x+160=180$
$x=20$

YES

#9 Given: $\overline{AB} \cong \overline{CD}$
$\overline{AG} \cong \overline{BE}$; $\overline{AG} \parallel \overline{BE}$

Conc: $\overline{GC} \parallel \overline{ED}$



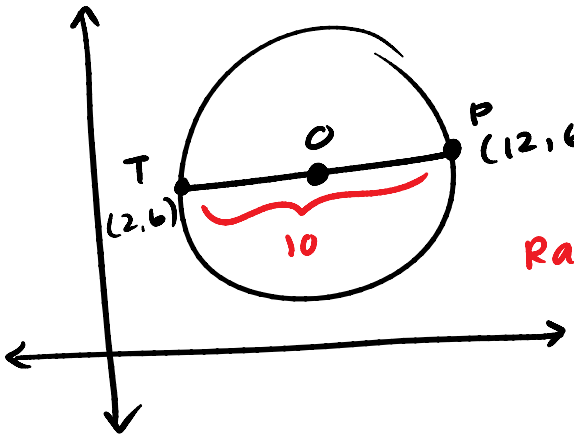
1. $\overline{AB} \cong \overline{CD}$	1. Given
2. $\overline{AC} \cong \overline{BD}$	2 Addition prop.
3. $\overline{AG} \cong \overline{BE}$	3. Given
4. $\overline{AG} \parallel \overline{BE}$	4. Given
5. $\angle A \cong \angle 1$	5. If // lines → corr. $\angle$s $\cong$
6. $\triangle AGC \cong \triangle BED$	6. SAS
7 $\angle 2 \cong \angle D$	7. CPCTC
8. $\overline{GC} \parallel \overline{ED}$	8. If corr. $\angle$s $\cong$ → // lines

#17 Find the area of the circle

$A = \pi r^2$

$A = \pi(5)^2$

$A = 25\pi \approx 78.540\ u^2$



Radius = 5

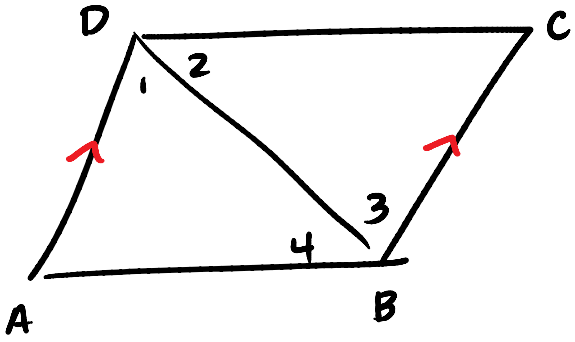
#18 Given: $\overleftrightarrow{AD} \parallel \overleftrightarrow{BC}$

$m\angle 1 = 5.63x + 2.42$

$m\angle 2 = 2.1x$ 42.672

$m\angle 3 = 6x - 5.1$

$m\angle 4 = 42$



a. Find: $m\angle 1$

$5.63x + 2.42 = 6x - 5.1$

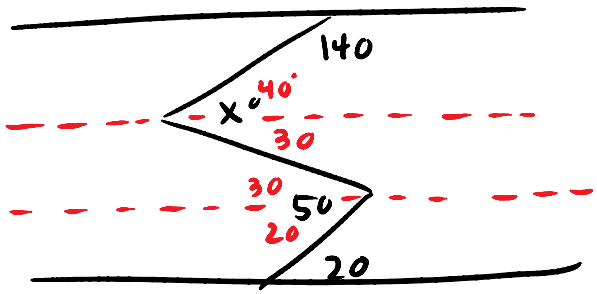
$7.52 = .37x$

$20.32 \approx x$

$m\angle 1 \approx 116.8$

b. Is $\overleftrightarrow{DC} \parallel \overleftrightarrow{AB}$ No - alt int $\angle$s not $\cong$

#25



$x = 30 + 40 = \boxed{70°}$