1st semester Exam Part 1

P.71

5) $1+3=4$
$2+4=6$
$5+6=11$

8) $\overleftrightarrow{QR}$ or $\overleftrightarrow{RQ}$

11) False, go opposite ways

14) $3m+5=4m-10$
$-3m\ +10\ \ -3m\ +10$
$15=m$

15) $XY+YZ=XZ$
$a+a+8=50$
$2a+8=50$
$-8\ \ -8$
$2a=42$
$a=21$

$XY=a=21$
$YZ=a+8=29$

16) acute

17) right

20) $\angle ADB$ & $\angle BDC$
&

22) $\angle ADC$ & $\angle EDF$
$\angle ADE$ & $\angle CDF$

21) $\angle ADC$ & $\angle CDF$
$\angle CDF$ & $\angle FDE$
a few more, make sure they form a line

23) Same as #21

24) $3x+31+2x-6=180$
$5x+25=180$
$5x=155$
$x=31$

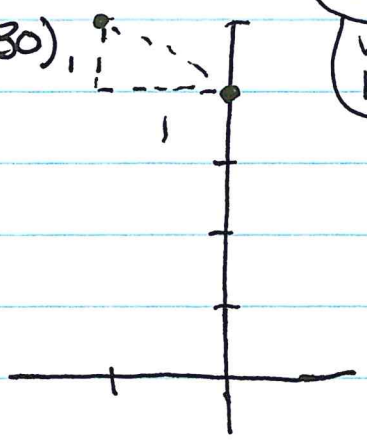
25) $3x + 4x - 15 = 90$

$7x - 15 = 90$

$7x = 105$

$x = 15$

30)



$1^2 + 1^2 = c^2$

$2 = c^2$

$\sqrt{2} = c$

≈ 1.4

or

$\sqrt{(-1-0)^2 + (5-4)^2}$

$= \sqrt{(-1)^2 + (1)^2} = \sqrt{1+1}$

$= \sqrt{2} = 1.4$

33) $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

$\left(\frac{-3+3}{2}, \frac{2+-2}{2}\right)$

$= \left(\frac{0}{2}, \frac{0}{2}\right) = (0,0)$

Ch. 2 p. 130

18) Converse: $q \to p$

If measure is greater than 90, but less than 180 degrees, then obtuse: True

inverse $\neg p \to \neg q$

if not obtuse, then not greater than 90 and less than 180°: True

Contrapositive: $\neg q \to \neg p$

If not greater than 90 and less than 180, then not obtuse. True

34) $3y + 20 = 5y - 16$
$-3y + 16 \quad -3y + 16$
$36 = 2y$
$18 = y$

35) $3(18) + 20$
$= 74°$

37) $180 - 74$
$= 106°$

P. 133
12) Substitution or transitive

P. 207
7) $\angle 6 \& \angle 3$
$\angle 2 \& \angle 7$

8) $\angle 5 \& \angle 8$

9) $\angle 5 \& \angle 1$
$\angle 2 \& \angle 4$
$\angle 2 \& \angle 5$

10) $\angle 7 \& \angle 1$

13) $\angle 1 = 120$, corresponding
$\angle 2 = 120$, alt ext.

14) $\angle 1 = 75$, same side int are sup.
$\angle 2 = 105$, alt int

17) $130 + 2x + 10 = 180$
$2x + 140 = 180$
$-140 \quad -140$
$2x = 40$
$\div 2 \quad \div 2$
$x = 20$

26) $x + 90 = 135$
$x = 45$
$y + 135 = 180$
$y = 45$

40) need slope

$\frac{2--2}{4-3}$ $\quad \frac{\Delta y}{\Delta x}$

$\frac{4}{1}$ = slope

$y - y_1 = m(x - x_1)$

$y - 2 = 4(x - 3)$

45) // slope stays the same

$m = 8$

$y - 2 = 8(x + 6)$

$y - 2 = 8(x + 6)$

P. 211 #22

A) Given

B) corresponding <'s

C) Given

D) Transitive or substitution

E) converse of corresponding

P. 194 #34

vert → $x = 4$

$y = 7$ ← that easy

Hor.