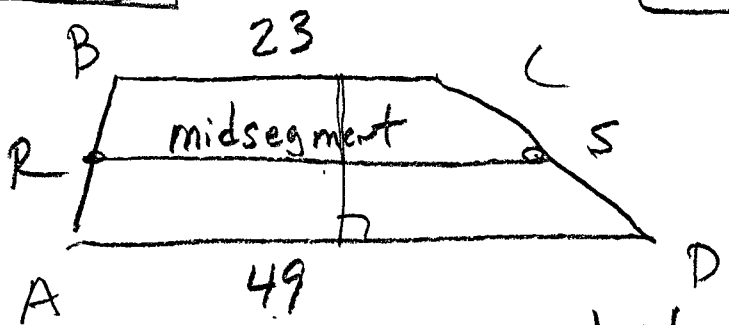
Geometry Wed. 3-13-13 Class Notes

(1)



$RS = ?$

$\text{Midsegment} = \frac{b_1+b_2}{2}$ or $\frac{1}{2}(b_1+b_2)$

$= \frac{23+49}{2} = \frac{72}{2} = \boxed{36}$

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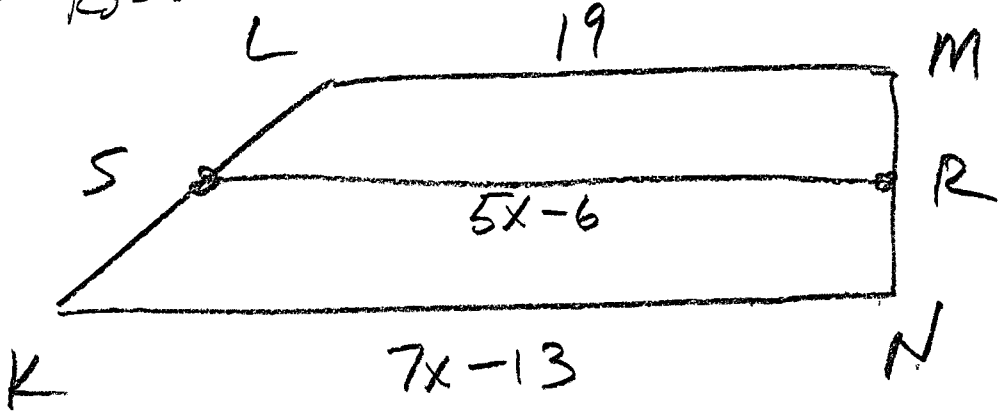
(11) $RS = ?$



$\frac{(7x-13)+19}{2} = 5x-6$

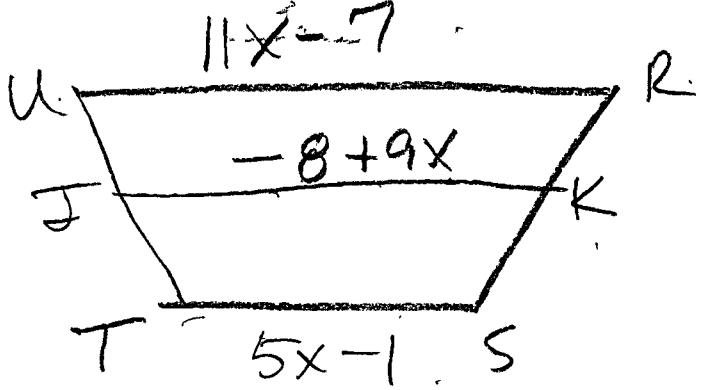
$7x+6 = 10x-12$

$18 = 3x \quad \therefore x = 6$

$\therefore \overline{RS} = 5(6)-6$

$= \boxed{24}$

(9)



Find $\overline{JK}$

$$\frac{(11x-7)+(5x-1)}{2} = -8+9x$$

$$16x-8 = -16+18x$$

$$-16x \qquad\qquad -16x$$

$$-8 = -16+2x$$

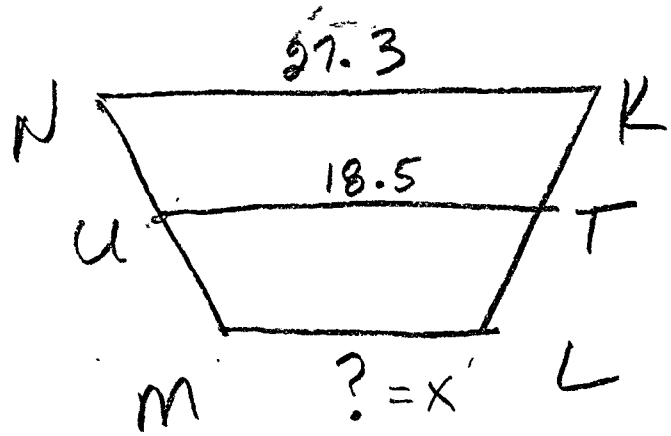
$$8 = 2x$$

$$4 = x$$

$\therefore \overline{JK} = -8+9(4)$

$= \boxed{28}$

(17)



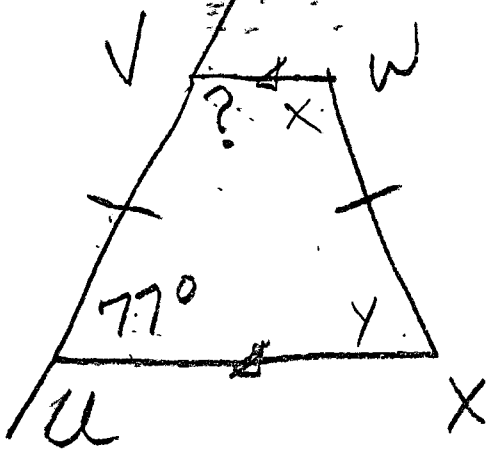
$$18.5 = \frac{27.3 + x}{2}$$

$$37 = 27.3 + x$$

$$-27.3 = x$$

$$\boxed{9.7 = x}$$

(27)



$? = \boxed{103^\circ}$

$X = 103^\circ$

$Y = 77^\circ$

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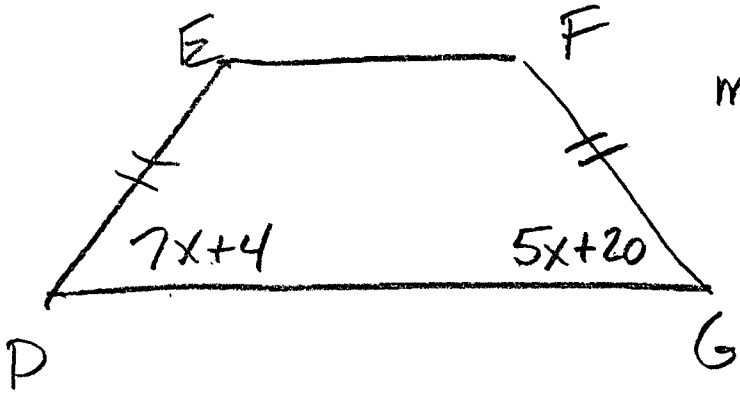
(35)



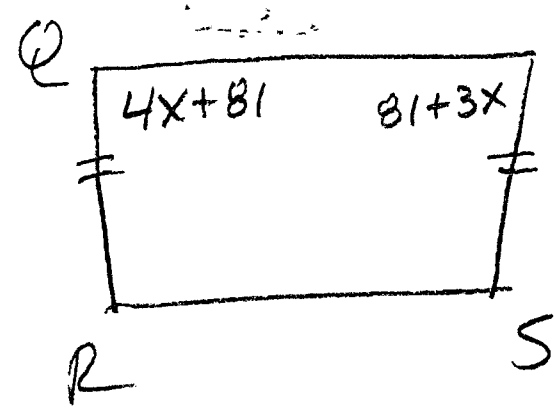
$m\angle G = ?$

$$7x+4 = 5x+20$$
$$-5x \qquad -5x$$
$$2x+4 = 20$$
$$-4 \quad -4$$
$$2x = 16$$
$$x = 8$$

$\therefore 5(8)+20$

$= \boxed{60^\circ}$

(31)



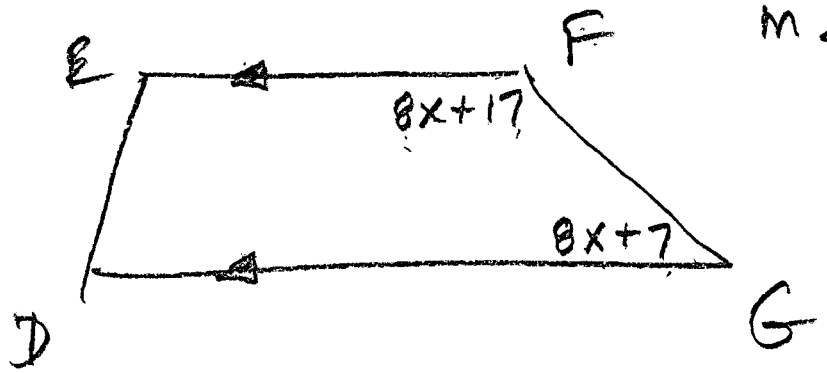
$m\angle Q = ?$

$4X + 81 = 81 + 3X$

$X = 0$

$m\angle Q = 81^\circ$

(Ex)



$m\angle F = ?$

$(8X+17)+(8X+7) = 180$

$16X + 24 = 180$

$-24 \quad -24$

$16X = 156$

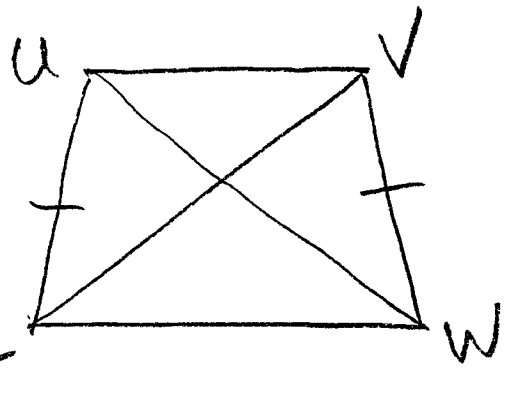
$X = \frac{156}{16} = \frac{78}{8} = \frac{39}{4}$

$\therefore m\angle F =$

$= 8\left(\frac{78}{8}\right) + 17$

$= 95^\circ$

(43)



$\overline{TV} = 4x-3$

$\overline{UW} = 2x+5$

$\overline{TV} = ?$

$4x-3 = 2x+5$

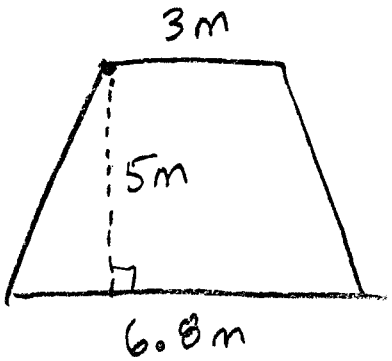
$2x = 8$

$x = 4$

$\therefore TV = 4(4)-3$

$\boxed{TV = 13}$

(61)



$$A = \frac{1}{2}(b_1 + b_2)h = \frac{1}{2}(3+6.8)5$$
$$= \frac{1}{2}(9.8)5$$
$$= (4.9)5 = \boxed{24.5\,m^2}$$

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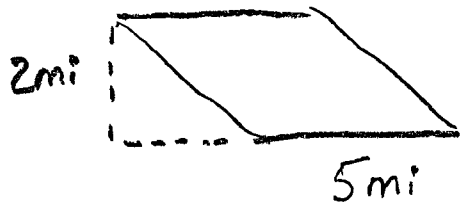
(62)



$$A = bh$$
$$A = (5)(2) = \boxed{10\,mi^2}$$

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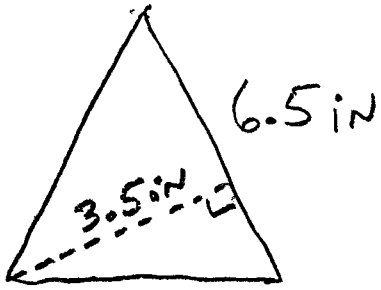
(71)



$$A_\Delta = \frac{1}{2}bh$$

$$A = \frac{1}{2}(6.5)(3.5)$$

$$= \frac{1}{2}\left(\frac{13}{2}\right)\left(\frac{7}{2}\right)$$

$$= \frac{91}{8} = 11.375$$

$\frac{1}{2}(6.5)(3.5)$

$(3.25)(3.5)$

$$\begin{array}{r} 3.25 \\ \times\ 3.5 \\ \hline 1625 \\ 975 \\ \hline 11.375 \end{array}$$