099 §2.6 #s 18, 40, 44, 53, 68

#s 1-END Solve the absolute value equation.

(18) $|3y+2|=0$ DEGENERATE CASE, WHERE THE RHS IS ZERO.

$\Rightarrow 3y+2=0$

$3y=-2$

$y=-\frac{2}{3}$

$y \in \boxed{\left\{-\frac{2}{3}\right\}}$ = sol'n set

(40) $|x+4|-4=1$

$+4=+4$

$|x+4|=5$

$x+4=5$ OR $x+4=-5$

$-4=-4$ $-4=-4$

$x=1$ OR $x=-9$

$x \in \boxed{\{-9, 1\}}$

~~48~~ $\left|\frac{n}{3}+2\right|=4$

$\frac{n}{3}+2=4$ OR $\frac{n}{3}+2=-4$

$n+6=12$ $n+6=-12$

$n=6$ $n=-18$

$n \in \boxed{\{-18, 6\}}$

(44) $|1-3b|=-7$ NEVAH!

(53) $|5x+1|=|4x-7|$ Easier than it looks

$5x+1=4x-7$ OR $5x+1=-(4x-7)=$

$5x=4x-8$ $5x+1=-4x+7$

$x=-8$ $5x=-4x+6$

$9x=6$

$x=\frac{6}{9}=\frac{2}{3}$

$x \in \boxed{\left\{-8, \frac{2}{3}\right\}}$

099 §2.6 #68

(68) $\left|\frac{2r-6}{5}\right| = |-2| = 2$

$\frac{2r-6}{5} = 2$ OR $\frac{2r-6}{5} = -2$

$2r-6 = 10$

$2r = 16$

$r = 8$

$2r-6 = -10$

$2r = -4$

$r = -2$

$r \in \{-2, 8\}$