Notes: Solving Word Problems 8/ involving 2 numbers 11/7

1.) Let 1st # = x = 10 ans
2nd # = $4x$ = 40

$1x + 4x = 50$

$\frac{5x}{5} = \frac{50}{5}$

$x = 10$

$4(10) = 40$

2.) Let smaller # = x = 36 ans
larger # = $x + 12$ = 48

$1x + 1x + 12 = 84$

$2x + 12 = 84$

$-12 \quad -12$

$\frac{2x}{2} = \frac{72}{2}$

$x = 36$

$36 + 12 = 48$

$2\overline{)72}$ → 36, $-6\downarrow$, 12

3.) Let 1st # = $x - 9$ = 18 ans
2nd # = x = 27

$1x - 9 + 1x = 45$

$2x - 9 = 45$

$+9 \quad +9$

$\frac{2x}{2} = \frac{54}{2}$

$x = 27$

$x - 9$

$27 - 9$

$2\overline{)54}$ → 27, $-4\downarrow$, 14

$\frac{27}{-9}$

18

87 finish for hw 11/7

4.) Let 1st # = x = 25 ans
2nd # = $2x+5$ = 55

$1x+2x+5=80$
$3x+5=80$
$-5 \quad -5$
$\frac{3x}{3}=\frac{75}{3}$

$x=25$

$2x+5=2(25)+5=55$
$50+5$

$3)\overline{75}$ → 25
$-6\downarrow$
15

5.) Let smaller # = x = 16 ans
larger # = $3x-1$ = 47

$1x+3x-1=63$
$4x+1=63$
$-1 \quad -1$
$\frac{4x}{4}=\frac{64}{4}$

$x=16$

$3x-1=3(16)-1=47$

$4)\overline{64}$ → 16
$4\downarrow$
24

$16 \times 3 = 48$

6.) Let 1st # = $7x+4$ = 81 ans
2nd # = x = 11

$7x+4+1x=92$
$8x+4=92$
$-4 \quad -4$
$\frac{8x}{8}=\frac{88}{8}$

$x=11$

$7x+4$
$7(11)+4$
$77+4$
81

7) Let 1st # = $5x-8$ = 142 ans
2nd # = x =

$5x-8+x=172$
$6x-8=172$
$+8 \quad +8$
$\frac{6x}{6}=\frac{180}{6}$
$x=30$

$5x-8$
$5(30)-8$
$150-8$
142

8) Let $ necklace = $3x$ = 114 ans
$ bracelet = x = 48

$3x+x=192$
$\frac{4x}{4}=\frac{192}{4}$
$x=48$

$3x$
$3(48)$
114

$4\overline{)192}$ 48
-16
32

$48 \times 3 = 114$

9) Let Junior's age = x = 12 yr ans
grandpa's age = $6x-6$ = 66 yrs

$1x+6x-6=78$
$7x-6=78$
$+6 \quad +6$
$\frac{7x}{7}=\frac{84}{7}$
$x=12$

$7\overline{)84}$ 12
$-7x$
14

$12 \times 6 = 72$

$6x-6$
$6(12)-6$
$72-6$
66

$72-6=66$

84

10) Let # of hrs for 1st film = $2x-3$
# of hrs for 2nd film = x =

ans = 87 min

$$2x-3+1x=132$$
$$3x-3=132$$
$$+3 \quad +3$$
$$\frac{3x}{3}=\frac{135}{3}$$
$$x=45$$

$$3\overline{)135} \quad 45$$
$$-12$$
$$15$$

$$2x-3$$
$$2(45)-3$$
$$90-3$$
$$87$$