

HW #2 : p 384-5: 1-16, omit 10-11

1)  $\frac{4}{6} = \frac{9}{9}$   
 $36 = 6g$   
 $g = 6$

2)  $\frac{24}{30} = \frac{h}{50}$   
 $\frac{4}{5} = \frac{h}{50}$   
 $h = 40$

$\frac{24}{30} = \frac{32}{k}$   
 $\frac{4}{5} = \frac{32}{k}$   
 $k = 40$

3)  $\frac{36}{24} = \frac{42}{m}$   
 $\frac{3}{2} = \frac{42}{m}$   
 $3m = 84$   
 $m = 28$

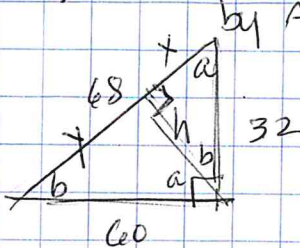
4)  $\frac{45}{30} = \frac{63}{5}$   
 $\frac{3}{2} = \frac{63}{5}$   
 $35 = 126$   
 $s = 42$

$\frac{3}{2} = \frac{n}{34}$   
 $108 = 2n$   
 $n = 54$

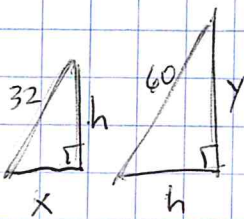
5) not similar  
 $\angle S \cong \angle U$   
 by  $\frac{37}{30} \neq \frac{35}{28}$

6)  $\frac{104}{91} = \frac{96}{84}$   
 $\frac{8}{7} = \frac{8}{7}$  OR  $104 \cdot 84 = 91 \cdot 96$   
 SAS

7)  $\triangle TMR \sim \triangle THM \sim \triangle MHR$



by AA  
 because  $a+b+90=180$



NOTES:

$\frac{x}{32} = \frac{32}{68}$   
 $\frac{y}{60} = \frac{60}{68}$   
 $\frac{h}{60} = \frac{32}{68}$

$\triangle QTA \sim \triangle QUR$   
 by AA

$\frac{3}{8} = \frac{4}{4+e}$   
 $12 + 3e = 32$   
 $3e = 20$   
 $e = \frac{20}{3} \approx 6\frac{2}{3}$

9)  $\frac{36}{36+f} = \frac{48}{48+32}$   
 $\frac{36}{36+f} = \frac{3}{5}$

$180 = 108 + 3f$   
 $72 = 3f$   
 $f = 24$

$\frac{36}{36+24+30} = \frac{48}{48+32+g}$

$\frac{36}{90} = \frac{48}{80+g}$

$\frac{6}{15} = \frac{48}{80+g}$

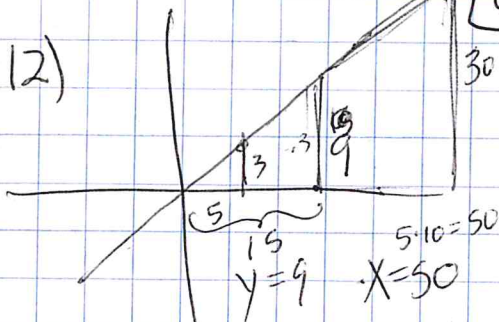
$6(80+g) = 48 \cdot 15$

$480 + 6g = 720$

$6g = 240$

$g = 40$

12)



13)  $\frac{12}{3} = \frac{6}{PF}$   
 $\frac{4}{1} = \frac{6}{x}$   
 $4x = 6$   
 $x = \frac{3}{2}$

$\frac{45}{15} = \frac{240}{48}$   
 $\frac{48}{720}$

14)  $\triangle ABC \sim \triangle ECD$   
 by AA  
 (CA are  $\cong$ )

15)  $\triangle RDX \cong \triangle RD'X'$  (reflection, rigid)  
 $\triangle RDX \sim \triangle BQX$  because  
 $\overline{BQ} \parallel \overline{RD}$  so CA are  $\cong$   
 $\therefore$  so AA shortcut  
 $\therefore \triangle BQX \sim \triangle R'D'X'$

16) translate  $\triangle ABC$   $(x, y) \rightarrow (x+11, y-8)$   
then dilate by a scale factor of 3  
from pt  $Q(9, 0)$