Pg. 478 #9, 10, 13-27odd

$V = whl$

9) $360 = 8(5)l$

$360 = 40l$

$9u = l$

In a rectangular prism, the "bases" can be any 2 opp. sides. Use the "bottom" face as the base

$LA = 2(9+8)(5)$

$= 2(17)(5)$

$= 170\ u^2$

$T.A = 170 + 2(9)(8)$

$= 170 + 144$

$= 314\ u^2$

10) $64 = e^3$

$\sqrt[3]{64} = e$

$4u = e$

$TA = 6e^2$

$= 6(4^2)$

$= 96u^2$

13) $LA = (3.2 + 5.8 + 6.9 + 4.7 + 9.4)(13)$

$= 30(13)$

$= 390\ u^2$

15) Original cube: $TA = 6e^2$, $V = e^3$

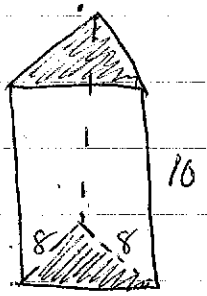
new cube: $TA = 6(2e)^2$

$= 6(4e^2)$

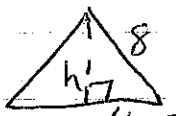
new TA is multiplied by 4 and new area is mult. by 8.

$V = (2e)^3$

$= 8e^3$

17) 


$LA = (3 \cdot 8)(10)$
$= 24(10)$
$= 240\ u^2$

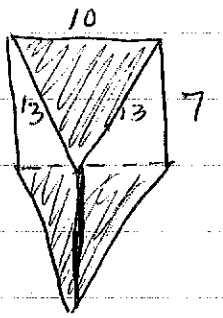



$h^2 + 4^2 = 8^2$
$h^2 + 16 = 64$
$h^2 = 48$
$h = 4\sqrt{3}$

$TA = 240 + 2\left(\frac{1}{2}\right)(8)(4\sqrt{3})$
$= (240 + 32\sqrt{3})u^2$

$V = (32\sqrt{3})(10)$
$= 320\sqrt{3}\ u^3$

$V = 16\sqrt{3}(10)$
$= 160\sqrt{3}\ u^3$

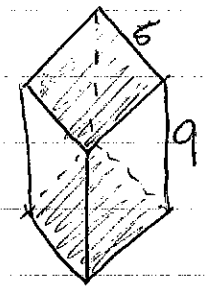
19) 

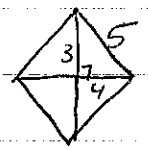

$LA = (13 + 13 + 10)(7)$
$= 36(7)$
$= 252u^2$

$TA = 252 + 2\left(\frac{1}{2}\right)(10)(10)$
$= 252 + 120$
$= 372u^2$


$h = 12$

$V = \frac{1}{2}(10)(12)(7)$
$= 420\ u^3$

21) 


$LA = (4)(5)(9)$
$= 180u^2$

$TA = 180 + 2\left(\frac{1}{2}\right)(6)(8)$
$= 180 + 48$
$= 228u^2$

$V = \frac{1}{2}(6)(8)(9)$
$= 216\ u^3$

23) $V = (30)(45)(0.5)$
$= 675\ cm^3$

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25) $V = 20(10)(5)$
$= 1000\ cm^3$

$V = 25(15)(4)$
$= 1500$

$\frac{1000cm^3}{1.2kg} = \frac{1500cm^3}{x}$

$1000x = 1800$
$x = 1.8\ kg$

27) $V_{whole} = (40)(20)(20)$
$= 16,000$

$V_{2\ holes} = 2(12)(10)(20)$
$= 4800$

$V_{block} = 16,000 - 4800$
$= 11,200\ cm^3$

$100cm = 1m$
$(100)^3 cm^3 = 1m^3$
$1,000,000\ cm^3 = 1m^3$

$V_{block} = \frac{11,200\ cm^3}{1,000,000} = .0112\ m^3$

Weight $.0112(1700) = \underline{19\ kg}$