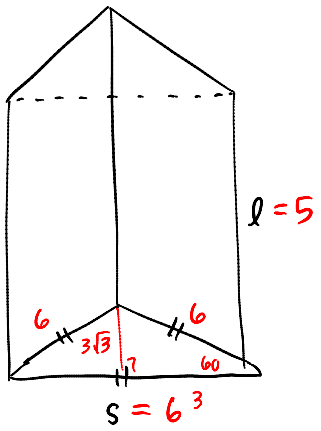
Section 12.1p. 563: 4, 6-11

#4



a. Find the total surface area if

a. $s = 6 \quad \ell = 5$

$L.S.A. = P_{Base} \cdot h$

$= 18 \cdot 5$

$= 90u^2$

$A_{base} = \frac{6 \cdot 3\sqrt{3}}{3}$

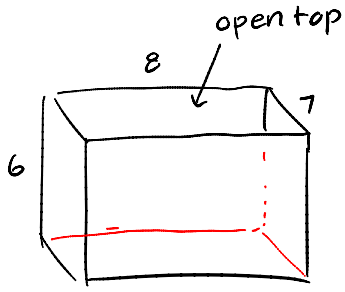
$= 9\sqrt{3}\,u^2$

$T.S.A. = 90 + 9\sqrt{3} + 9\sqrt{3}$

$= \boxed{90 + 18\sqrt{3}\,u^2}$

#6

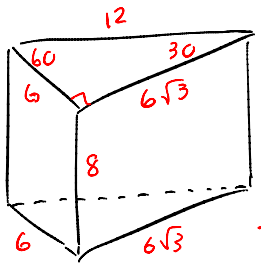
a.



$56 + 42 + 42 + 48 + 48$

$= \boxed{236u^2}$

b.



$L.S.A = 48 + 48\sqrt{3} + 96$

$= 144 + 48\sqrt{3}$

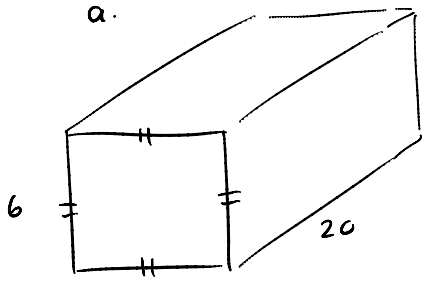
$A_\Delta = \frac{6 \cdot 6\sqrt{3}}{2} = 18\sqrt{3}$

$T.S.A. = 144 + 48\sqrt{3} + 18\sqrt{3}$

$= 144 + 66\sqrt{3}$

#7

a.



$L.S.A = P_{Base} \cdot h$

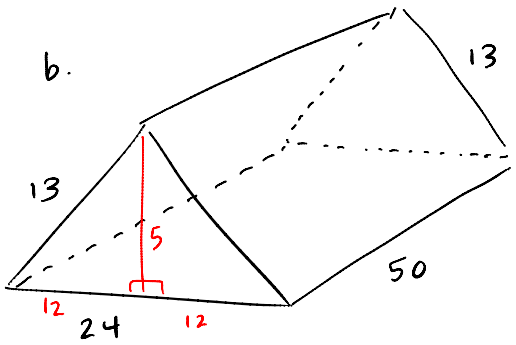
$= 24 \cdot 20$

$= 480\,u^2$

$T.S.A = 480 + 36 + 36$

$= 552\,u^2$

b.



$L.S.A = P_{Base} \cdot h$

$= 50 \cdot 50$

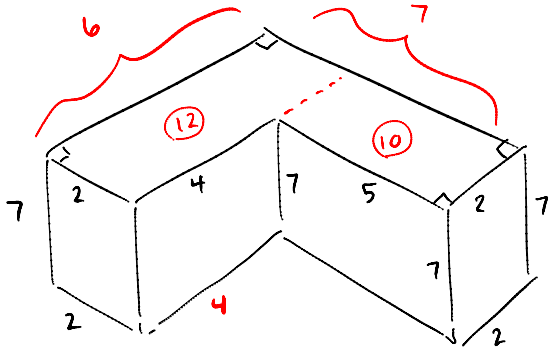
$= 2500\,u^2$

$A_{Base} = \frac{24 \cdot 5}{2} = 60$

$T.S.A = 2500 + 60 + 60$

$= \boxed{2620\,u^2}$

#8



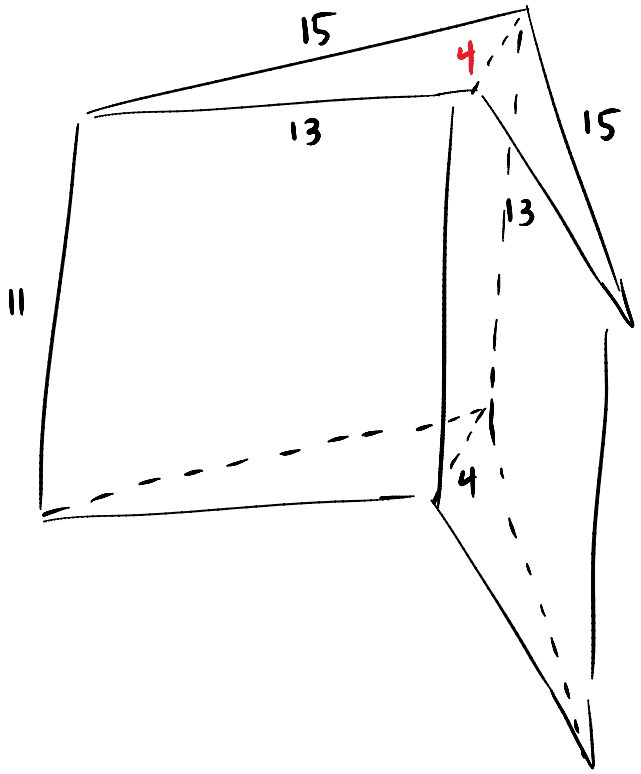
L.S.A = $P_{Base} \cdot h$ $\quad A_{base} = 22$

$= 26 \cdot 7$

$= 182$

T.S.A. $= 182 + 22 + 22 = \boxed{226\ u^2}$

#9



L.S.A $= P_{Base} \cdot h$

$= 56 \cdot 11$

$= \boxed{616}$

A_{Base}: $\quad s = \frac{32}{2} = 16$

$\sqrt{16(1)(3)(12)}$

$4 \cdot 2 \cdot 3 \cdot 1$

$= 24$

$A_{Base} = 48$

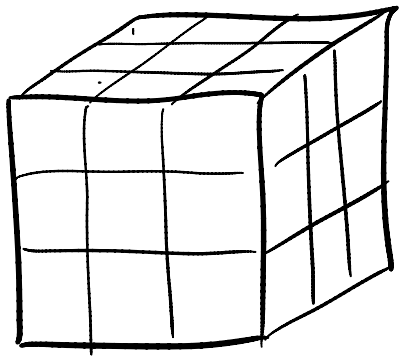
T.S.A. $= 616 + 48 + 48 = \boxed{712}$

#10 The perimeter of the scalene base of a pentagonal right prism is 17, and a lateral edge of the prism measures 10. Find the prisms lateral area.

$L.S.A = P_{Base}\, h$

$= 17 \cdot 10$

$= \boxed{170}$

#11

A 6in cube is painted on the outside and cut into