HW#7-
naviarut

1) $(\sqrt{3})(\sqrt{2})$
$\boxed{\sqrt{6}}$

2) $(\sqrt{5})^2$
$\boxed{5}$

3) $(3\sqrt{6})(2\sqrt{3})$
$3 \cdot 2 \cdot \sqrt{6} \cdot \sqrt{3}$
$6\sqrt{18}$
$6\sqrt{9} \cdot \sqrt{2}$
$6 \cdot 3\sqrt{2}$
$\boxed{18\sqrt{2}}$

4) $(7\sqrt{3})^2$
$7^2 \cdot \sqrt{3}^2$
$49 \cdot 3$
$\boxed{147}$

5) $(2\sqrt{2})^2$
$2^2 \cdot \sqrt{2}^2$
$4 \cdot 2$
$\boxed{8}$

6) $\sqrt{12} =$
$\sqrt{4} \cdot \sqrt{3}$
$\boxed{2\sqrt{3}}$

7) $\sqrt{18}$
$\sqrt{9} \cdot \sqrt{2}$
$\boxed{3\sqrt{2}}$

8) $\sqrt{40}$
$\sqrt{4} \cdot \sqrt{10}$
$\boxed{2\sqrt{10}}$

9) $\sqrt{75}$
$\sqrt{25} \cdot \sqrt{3}$
$\boxed{5\sqrt{3}}$

10) $\sqrt{85}$
$\boxed{\text{simplified}}$

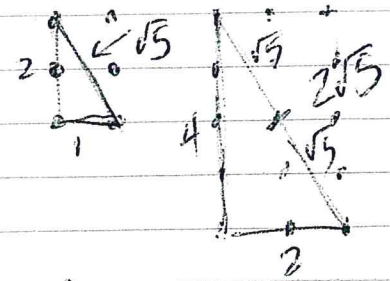
11) $\sqrt{96}$
$\sqrt{16} \cdot \sqrt{6}$
$\boxed{4\sqrt{6}}$

12) $\sqrt{576}$
$\boxed{24}$

13) $\sqrt{720}$
$\sqrt{144} \cdot \sqrt{5}$
$\boxed{12\sqrt{5}}$

14) $\sqrt{784}$
$\boxed{28}$

17)



1) $a = 72\sqrt{2}$ cm

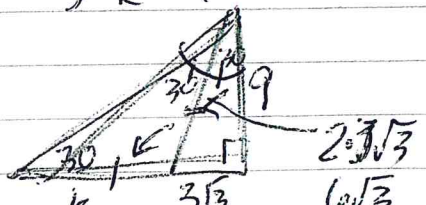
2) $b = 13$ cm

3) $a = 10$cm, $b = 5\sqrt{3}$cm

4) $d = 10$cm
$C = 10\sqrt{3}$cm

5) $f = 17$cm
$e = 34$cm

6) $k = 6\sqrt{3}$ cm



4
9
16
25
36
49
64
81
100
121
144
169
196
225
256
289
324
361
400

7) $BD = 12\sqrt{2}$ cm

$\triangle BDH$ = right $\triangle$

$(12\sqrt{2})^2 + 12^2 = d^2$

$144 \cdot 2 + 144 = d^2$

$288 + 144 = d^2$

$432 = d^2$

$\sqrt{144 \cdot 3} = \sqrt{d^2}$

$\sqrt{3}\sqrt{144} = \sqrt{d^2}$

$3\sqrt{12}$

$12\sqrt{3} = d$

8) $9^2 + 120^2 = 130^2$

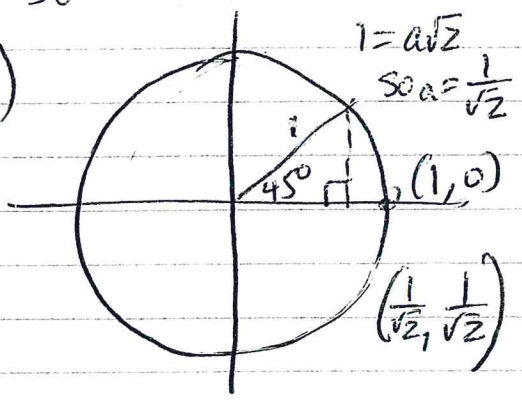
$9 = 50$ cm

opp side of rect $= 50$

Short leg of 30-60-90 $= 50$

so $h = 100$ cm

10)



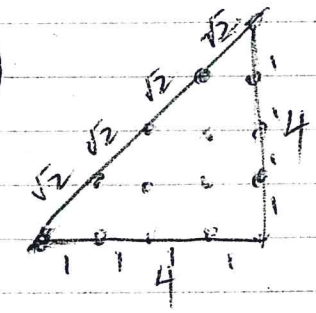
$1 = a\sqrt{2}$

$a = \frac{1}{\sqrt{2}}$

11) hypotenuse would be 16 if 30-60-90

12) $18 \cdot 4 = 72$ cm

13)



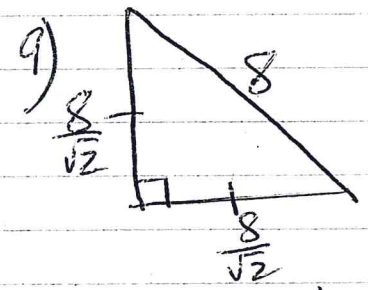
$4\sqrt{2}$

$4^2 + 4^2 = c^2$

$32 = c^2$

$c = \sqrt{32}$

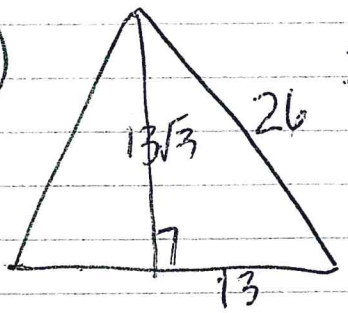
9)



$\frac{1}{2} \cdot \frac{8}{\sqrt{2}} \cdot \frac{8}{\sqrt{2}} = \frac{64}{2} = 32\text{cm}^2$

16cm^2

17)



$\frac{1}{2} \cdot b \cdot h$

$= 13 \cdot 13\sqrt{3}$

$169\sqrt{3}\ m^2$

$\approx 292.7\ m^2$