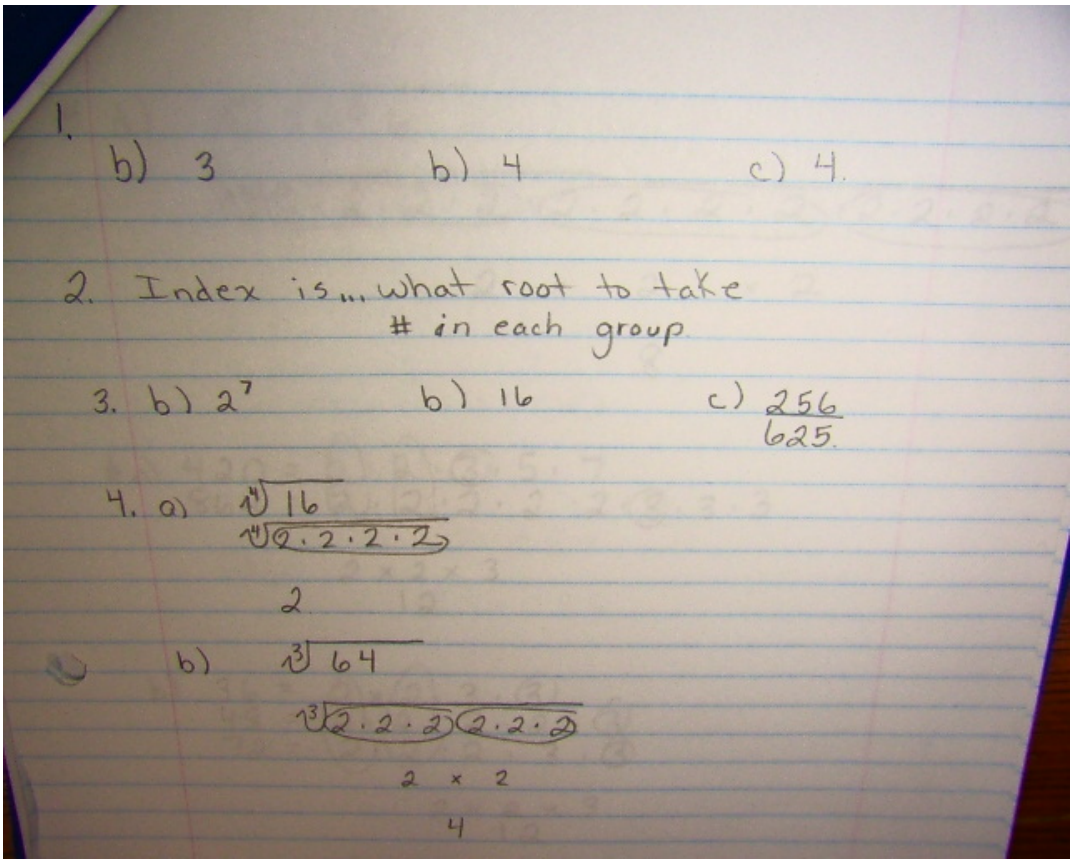


1.

b) 3 b) 4 c) 4.

2. Index is... what root to take
in each group

3. b) 2^7 b) 16 c) $\frac{256}{625}$

4. a) $\sqrt[4]{16}$

$\sqrt[4]{2 \cdot 2 \cdot 2 \cdot 2}$

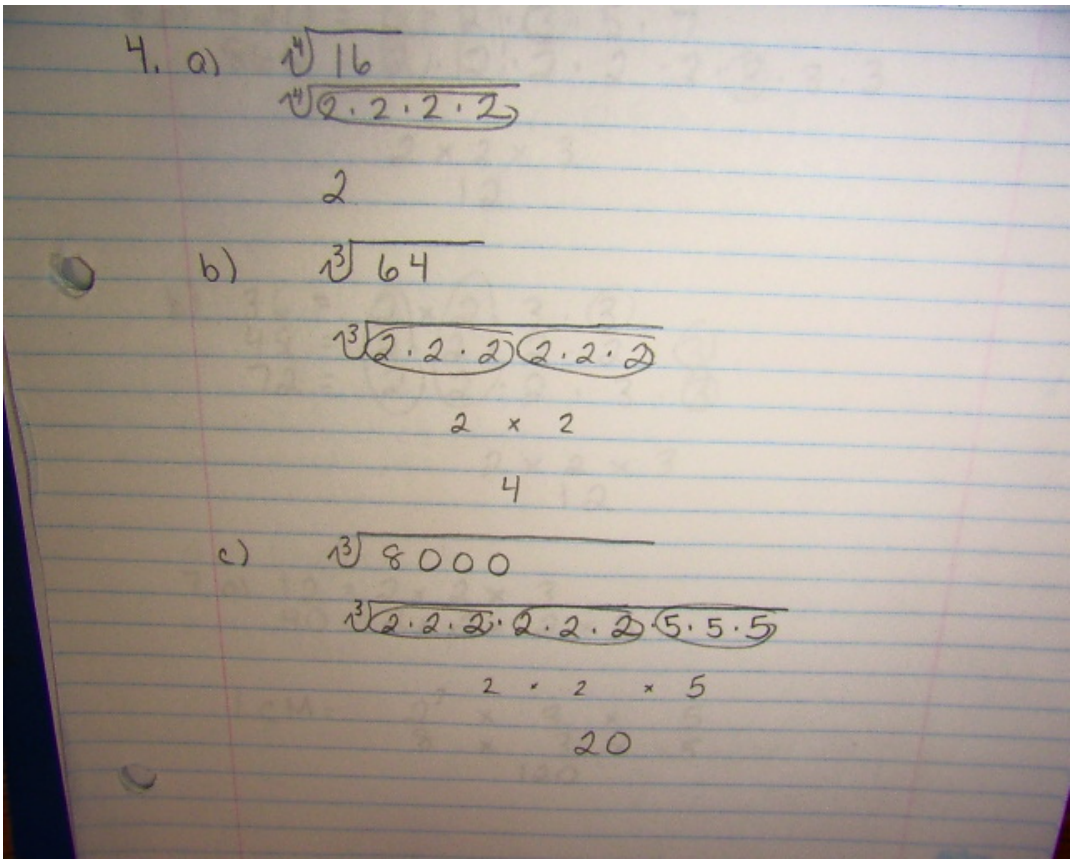
2

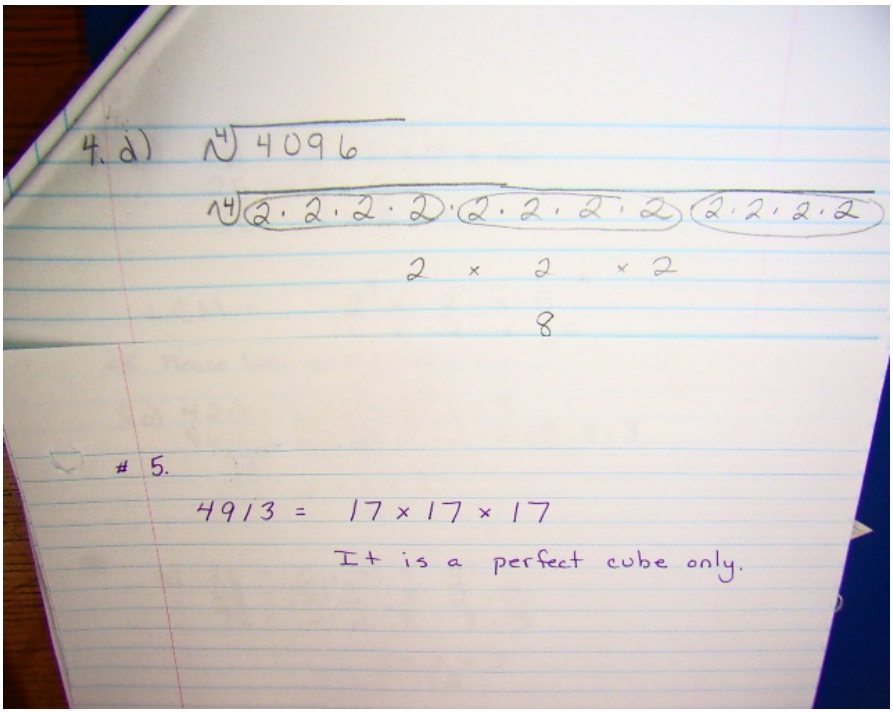
b) $\sqrt[3]{64}$

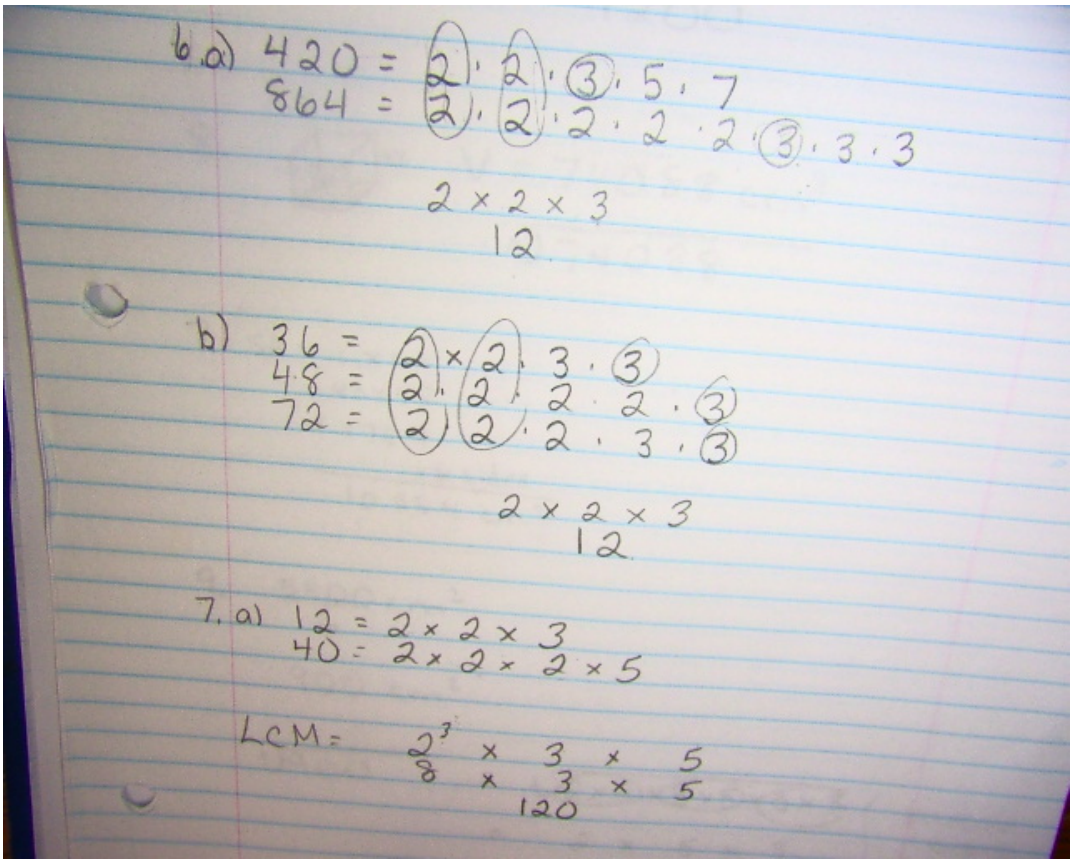
$\sqrt[3]{2 \cdot 2 \cdot 2}\sqrt[3]{2 \cdot 2 \cdot 2}$

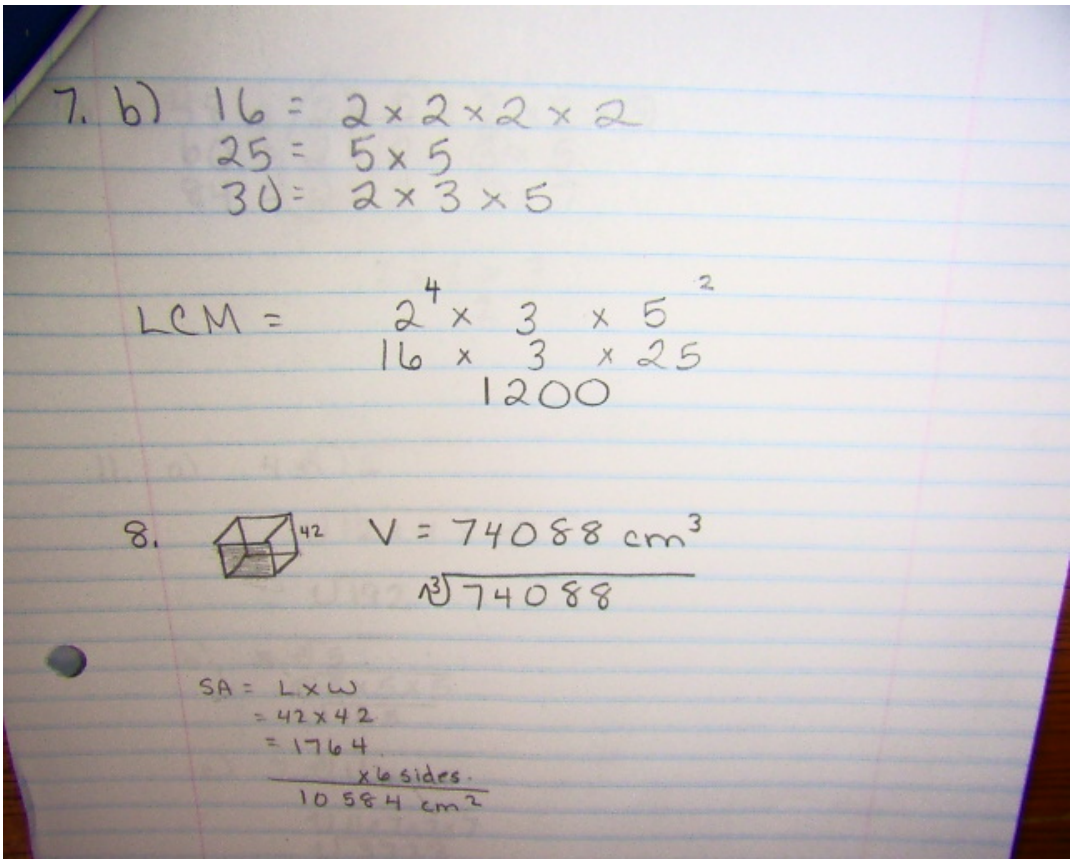
2×2

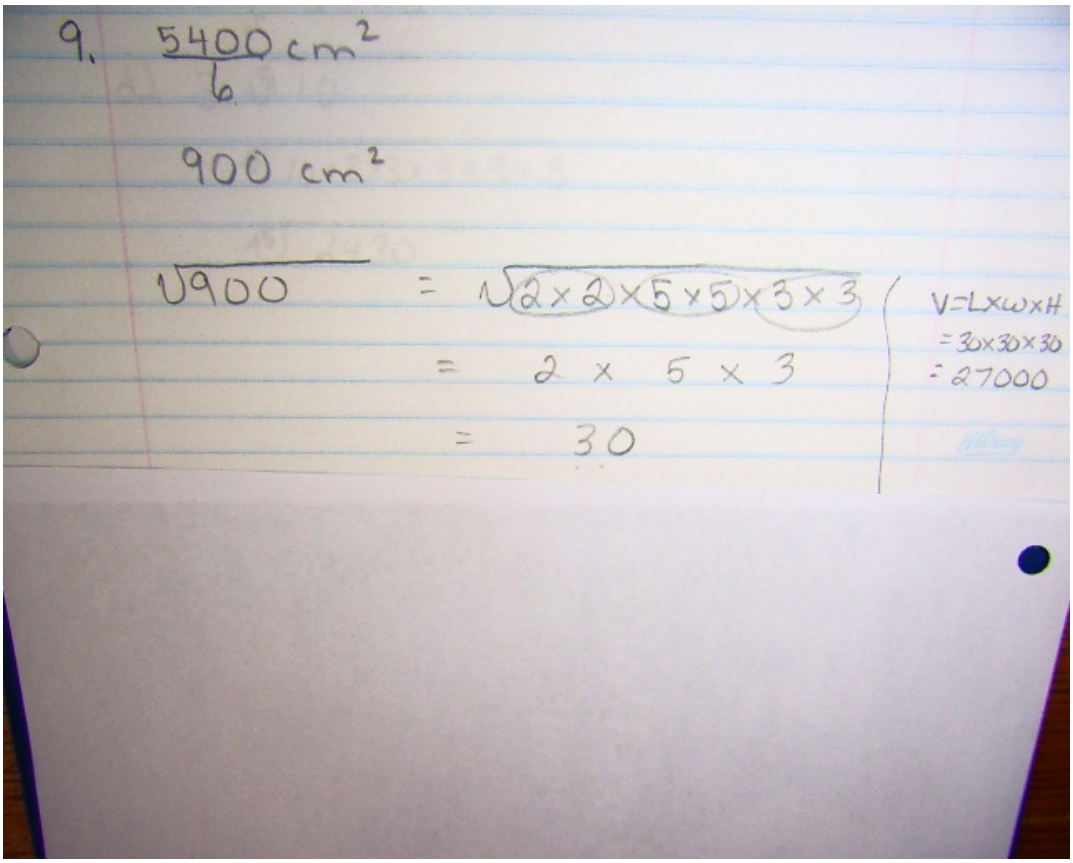
4

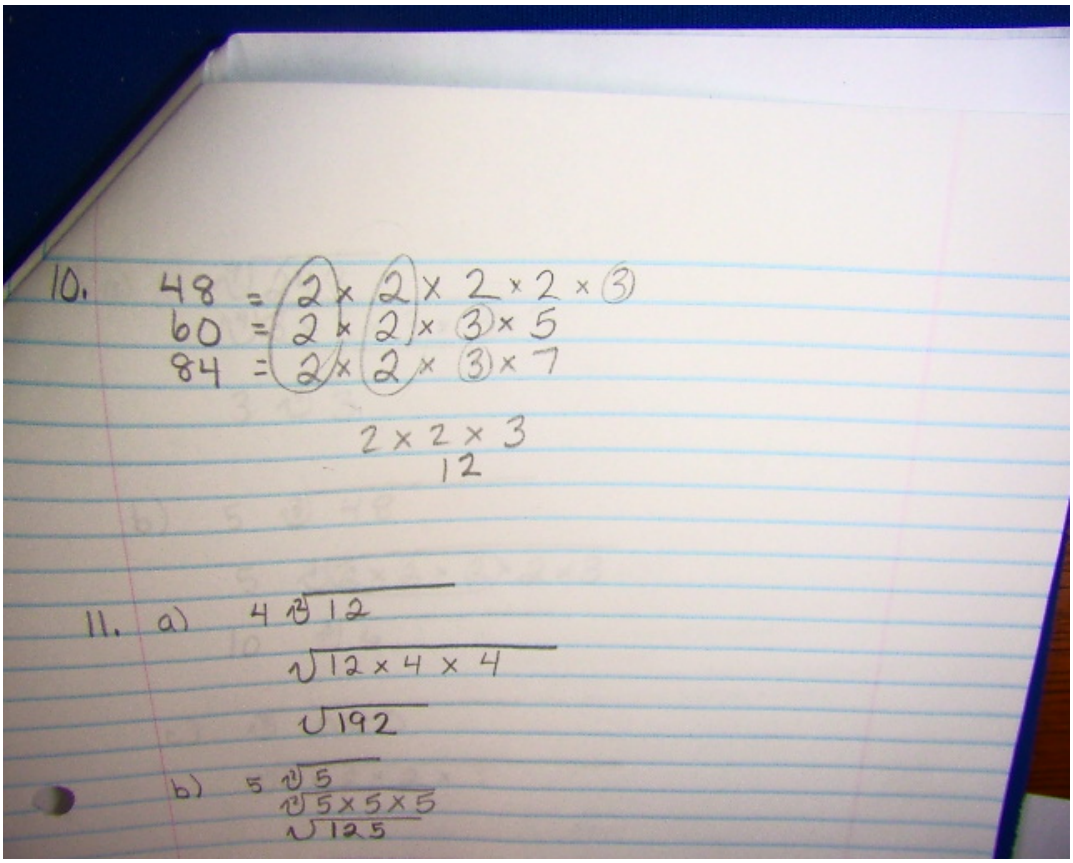

4. a) $\sqrt[4]{16}$
$\sqrt[4]{2 \cdot 2 \cdot 2 \cdot 2}$
2
b) $\sqrt[3]{64}$
$\sqrt[3]{2 \cdot 2 \cdot 2}\ \sqrt[3]{2 \cdot 2 \cdot 2}$
2 × 2
4
c) $\sqrt[3]{8000}$
$\sqrt[3]{2 \cdot 2 \cdot 2}\ \sqrt[3]{2 \cdot 2 \cdot 2}\ \sqrt[3]{5 \cdot 5 \cdot 5}$
2 · 2 × 5
20

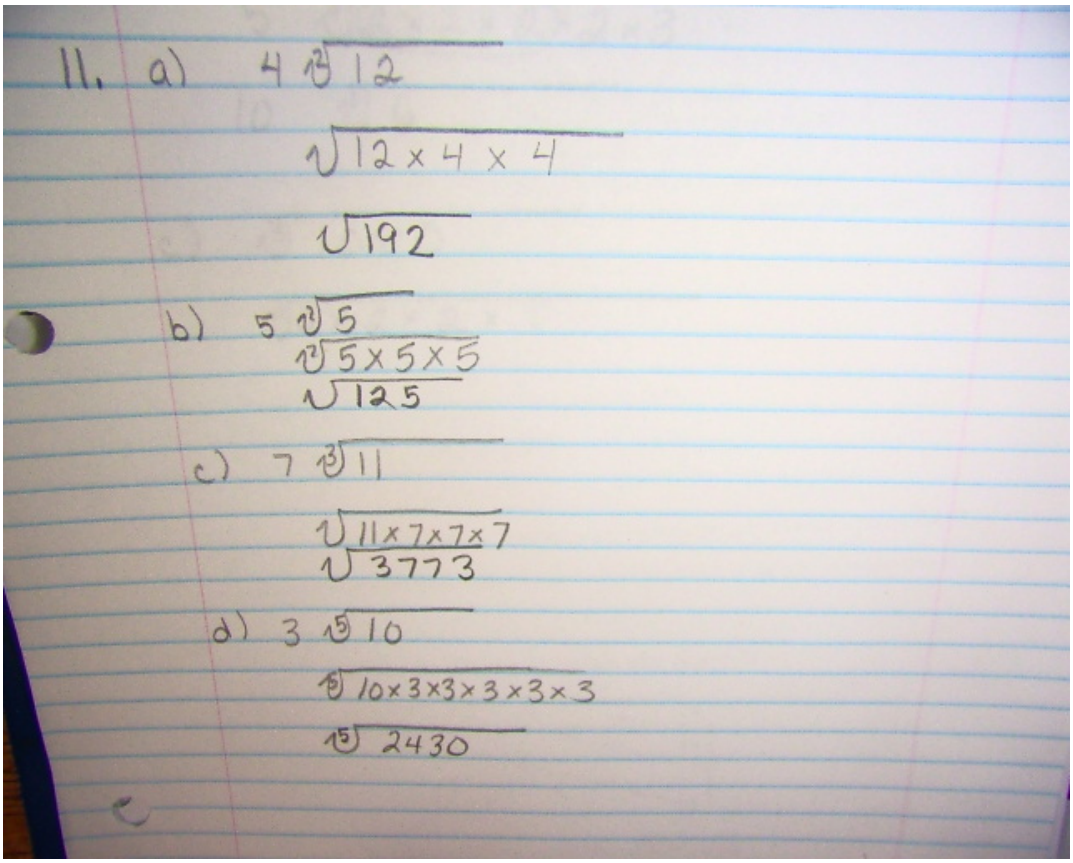

4. a) $\sqrt[4]{4096}$
$\sqrt[4]{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}$
2 × 2 × 2
8
# 5.
4913 = 17 × 17 × 17
It is a perfect cube only.

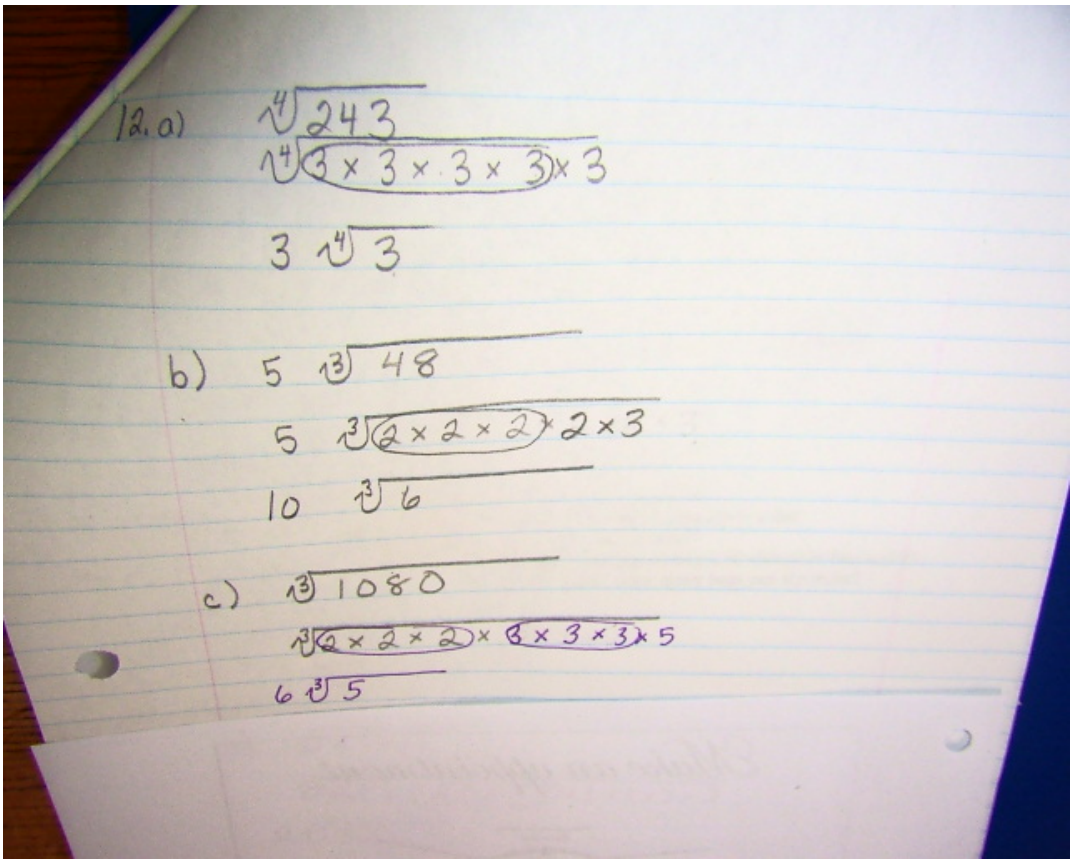

6. a) 420 = 2 · 2 · 3 · 5 · 7
864 = 2 · 2 · 2 · 2 · 2 · 3 · 3 · 3
2 × 2 × 3
12
b) 36 = 2 × 2 · 3 · 3
48 = 2 · 2 · 2 · 2 · 3
72 = 2 · 2 · 2 · 3 · 3
2 × 2 × 3
12
7. a) 12 = 2 × 2 × 3
40 = 2 × 2 × 2 × 5
LCM = 2³ × 3 × 5
8 × 3 × 5
120

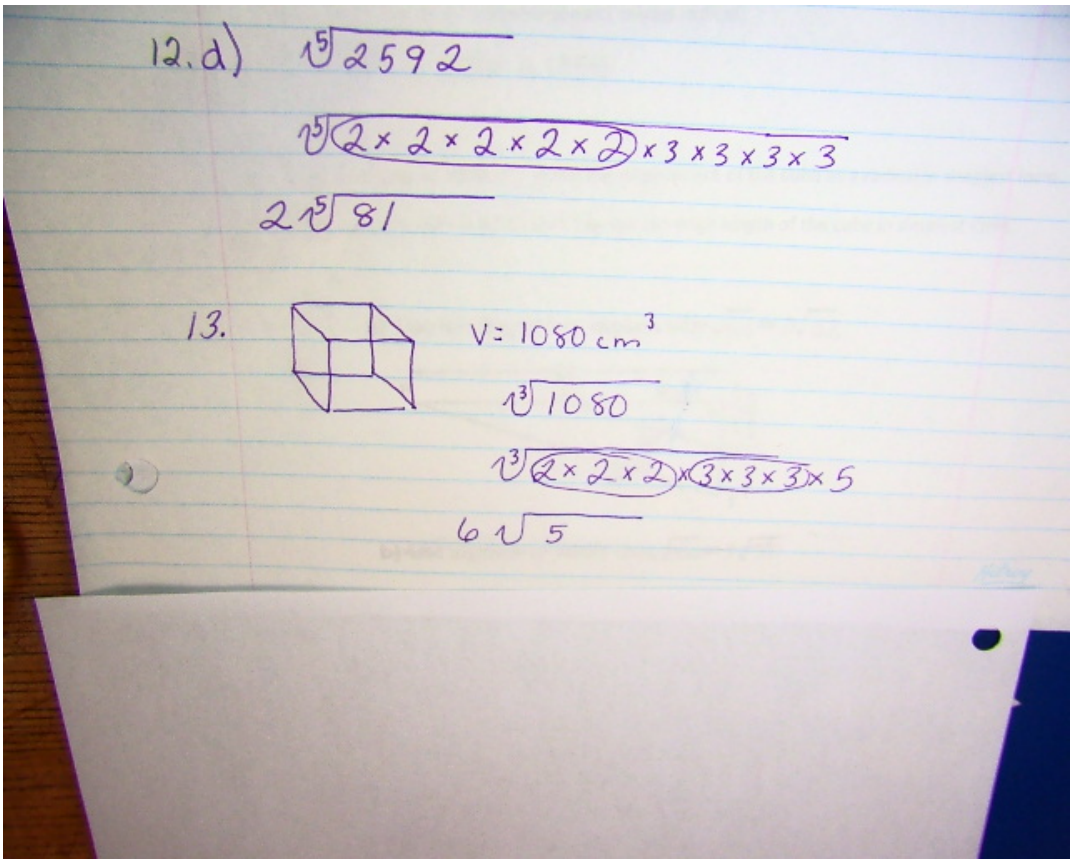

7. b) 16 = 2 x 2 x 2 x 2
25 = 5 x 5
30 = 2 x 3 x 5
LCM = 2^4 x 3 x 5^2
16 x 3 x 25
1200
8.
42
V = 74088 cm^3
∛74088
SA = L x W
= 42 x 42
= 1764
x 6 sides.
10584 cm^2

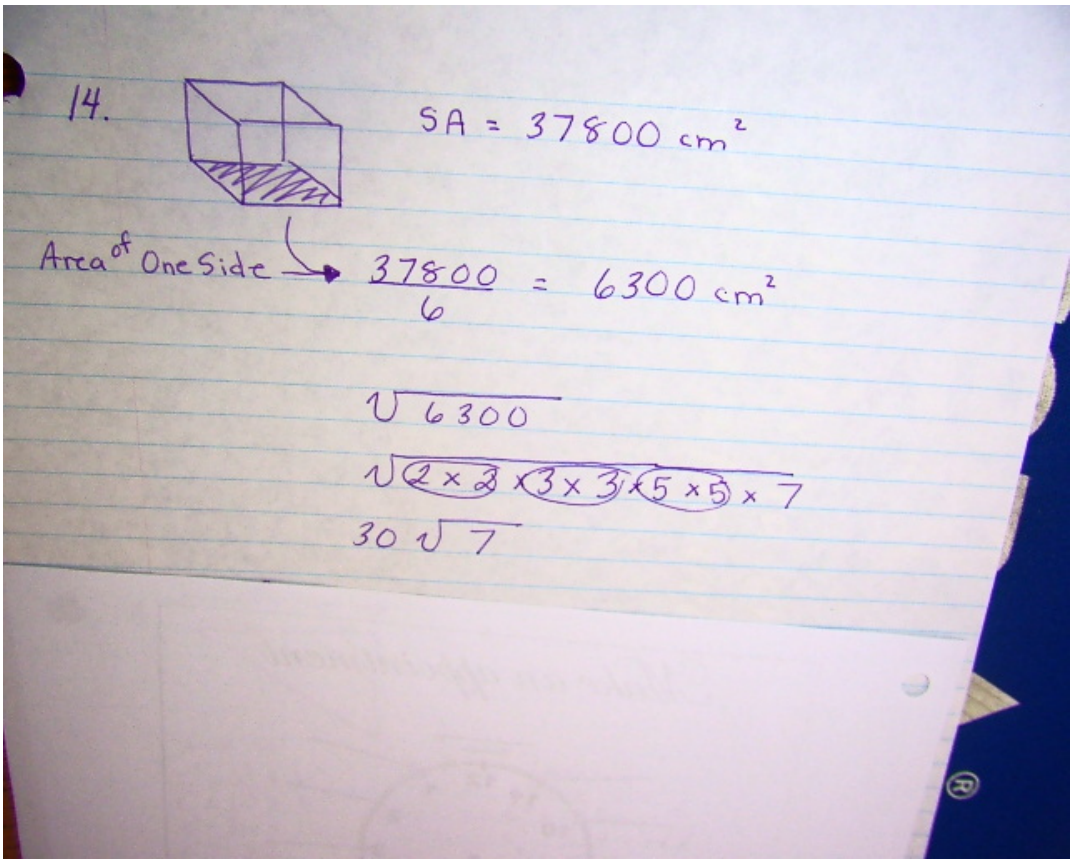

9. 5400 cm²
6
900 cm²
√900 = √2×2×5×5×3×3
= 2 × 5 × 3
= 30
V=L×W×H
=30×30×30
=27000

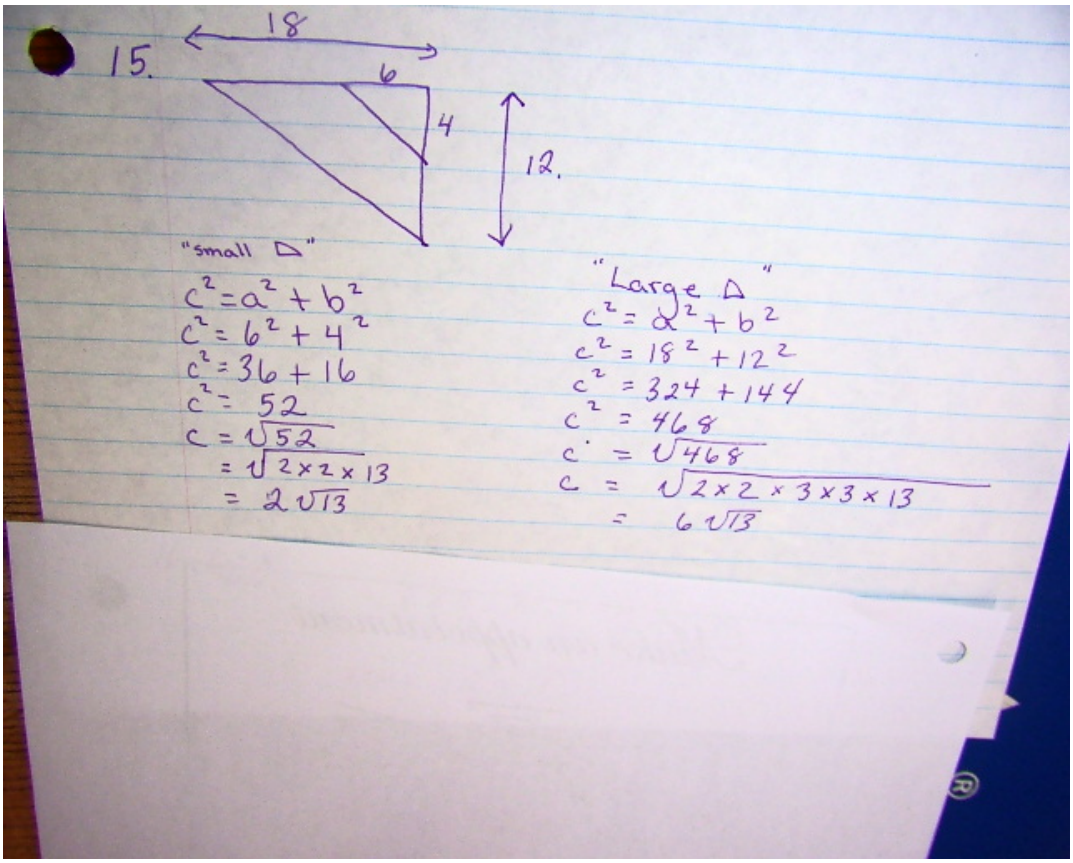

10.
48 = 2 x 2 x 2 x 2 x 3
60 = 2 x 2 x 3 x 5
84 = 2 x 2 x 3 x 7
2 x 2 x 3
12
11. a)
4 √12
√12 x 4 x 4
√192
b)
5 √5
√5 x 5 x 5
√125


11. a) 4 √12
√12 x 4 x 4
√192
b) 5 √5
√5 x 5 x 5
√125
c) 7 √11
√11 x 7 x 7 x 7
√3773
d) 3 √10
√10 x 3 x 3 x 3 x 3
√2430


12. a)
$\sqrt[4]{243}$
$\sqrt[4]{3 \times 3 \times 3 \times 3 \times 3}$
$3\sqrt[4]{3}$
b) $5\sqrt[3]{48}$
$5\sqrt[3]{2 \times 2 \times 2 \times 2 \times 3}$
$10\sqrt[3]{6}$
c) $\sqrt[3]{1080}$
$\sqrt[3]{2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5}$
$6\sqrt[3]{5}$


12. d) $\sqrt[5]{2592}$
$\sqrt[5]{2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 3}$
$2\sqrt[5]{81}$
13.
V = 1080 cm³
$\sqrt[3]{1080}$
$\sqrt[3]{2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5}$
$6\sqrt{5}$


14.
SA = 37800 cm²
Area of One Side
37800 / 6 = 6300 cm²
√6300
√2 × 2 × 3 × 3 × 5 × 5 × 7
30√7


15.
18
6
4
12.
"small Δ"
$c^2 = a^2 + b^2$
$c^2 = 6^2 + 4^2$
$c^2 = 36 + 16$
$c^2 = 52$
$c = \sqrt{52}$
$= \sqrt{2 \times 2 \times 13}$
$= 2\sqrt{13}$
"Large Δ"
$c^2 = a^2 + b^2$
$c^2 = 18^2 + 12^2$
$c^2 = 324 + 144$
$c^2 = 468$
$c = \sqrt{468}$
$c = \sqrt{2 \times 2 \times 3 \times 3 \times 13}$
$= 6\sqrt{13}$