

For 1 to 3, simplify. Use absolute value symbols when necessary.

1.  $\sqrt[3]{18a^5b^{14}}$

Handwritten breakdown:  $9 \cdot 2$ ,  $a^4 \cdot a$ ,  $b \cdot b$

$3a^2|b|\sqrt{2a}$

2.  $\sqrt[3]{32c^8d^{16}}$

Handwritten breakdown:  $8 \cdot 4$ ,  $c^6 \cdot c^2$ ,  $d^5 \cdot d^2$

$2c^2d^5\sqrt[3]{4c^2d}$

perfect  
cubes

- 8
- 27
- 64
- 125

3.  $\sqrt[6]{g^{23}h^{52}}$

$|g^3|h^8\sqrt[6]{g^5h^4}$

4. Simplify

$\sqrt{45} \cdot \sqrt{60} = \sqrt{2700}$

Handwritten breakdown:  $9 \cdot 5$ ,  $4 \cdot 15$

$30\sqrt{3}$

$3\sqrt{5} \cdot 2\sqrt{15} = 6\sqrt{75} = 6\sqrt{25 \cdot 3}$