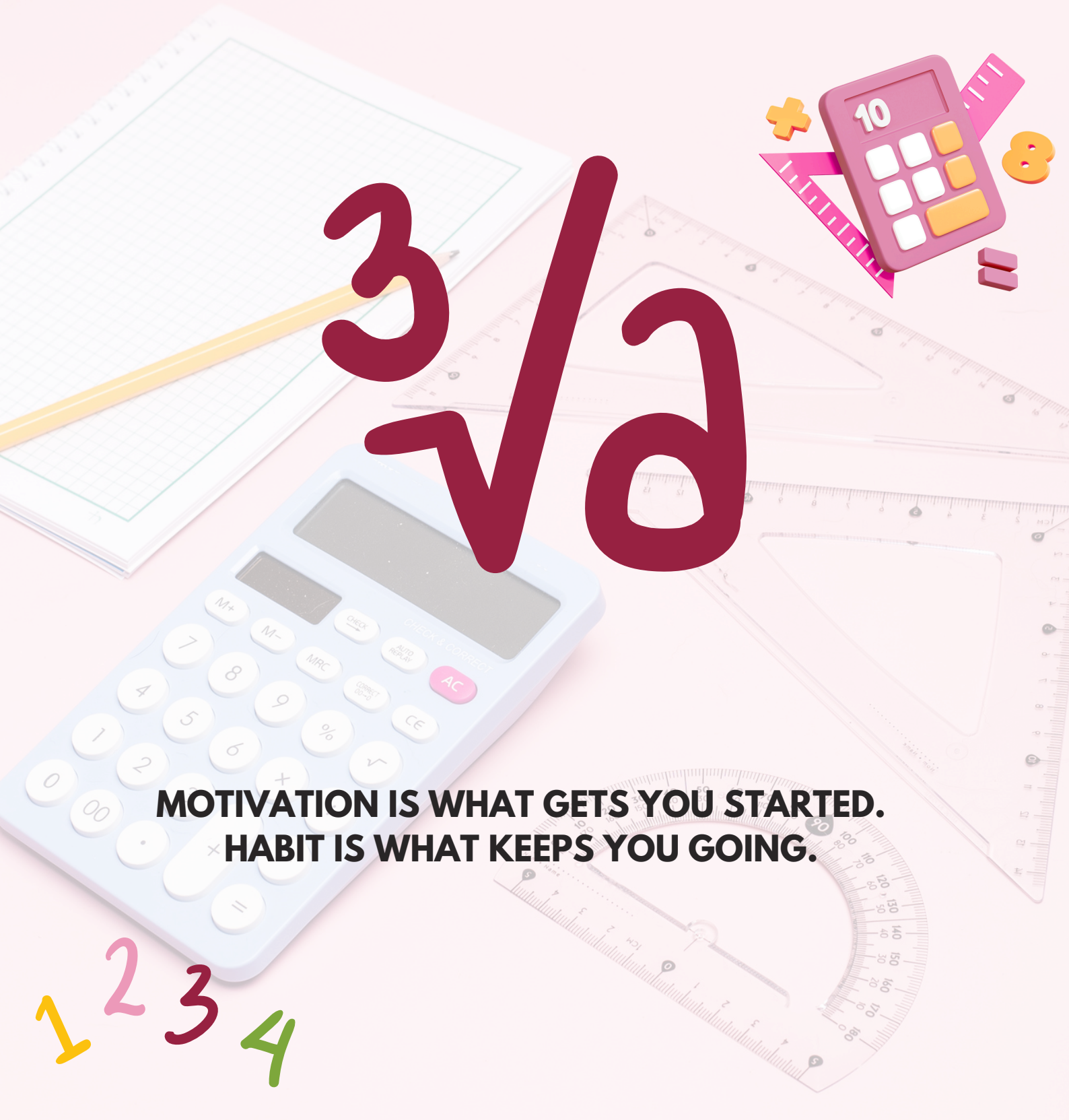# CUBE & CUBE ROOTS

Worksheet 5

$$\sqrt[3]{a}$$

MOTIVATION IS WHAT GETS YOU STARTED.
HABIT IS WHAT KEEPS YOU GOING.

1. Find the multiplicative inverse of: $\sqrt[3]{8 \times 17 \times 17 \times 17}$

_____

2. If $\sqrt[3]{729} = 9$ then $\sqrt[3]{0.000729} =$?

A. 0.09   B. 0.009   C. 0.0009   D. 0.007

_____

3. Evaluate: $\left\{ \left(6^2 + \left(8^2 \right)^{\frac{1}{2}} \right) \right\}^3$

A. 85884   B. 85114   C. 85184   D. 84184

_____

4. Evaluate: $125\sqrt[3]{a^6} - \sqrt[3]{125a^6}$

A. 120   B. $120a^2$ C. 120   D. $121a^2$

_____

5. Evaluate: $\sqrt[3]{700 \times 2 \times 49 \times 5}$

A. 70   B. 700   C. 7000   D. 7

_____

6. Evaluate: $\sqrt[3]{\dfrac{0.027}{0.008}} \div \sqrt{\dfrac{0.09}{0.04}} - 1$

A. 1   B. –1   C. 0   D. undefined

7. Find the smallest number by which 8768 must be divided so that the quotient is a perfect cube.

A. 131   B. 133   C. 135   D. 137

_____

8. Evaluate: $\sqrt[3]{(-1331) \times (3375)}$

A. –165   B. 165   C. 156   D. –156

_____

9. Simplify: $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$

A. 3.6   B. 3.8   C. 0.36   D. 0.038

_____

10. Difference of two perfect cubes is 387. If the cube root of the greater of two numbers is 8, find the cube root of the smaller number.

A. 5   B. 3   C. 7   D. 8

_____

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Answer Key

1. 1/34
2. A
3. C
4. B
5. A
6. C
7. D
8. A
9. A
10. A