



MEDMATHMINDSET PROVIDER MATH ATLAS

Surgical Technology math, one domain at a time.

A focused, printable reference built from MedMathMindset's current provider-specific quantitative blueprint.

BLUEPRINT SNAPSHOT

9 domains | 100% total instructional weight

Domains are ordered from highest to lowest MedMathMindset instructional weight. These are MedMathMindset training weights, not official credentialing-body exam percentages unless an official source explicitly states otherwise.

USE IT THREE WAYS

Teach | Review | Print

Use the worked examples as a quick class reference, learner review sheet, or printable teaching aid.

WHAT THE ATLAS ADDS

Example + reasoning + check

Each domain pairs one worked example with the setup, answer, and a reasonableness check.

DOMAINS IN THIS ATLAS

1. Surgical Technology Math 18%

3. Ratios / Proportions 12%

5. Fractions / Decimals 10%

7. Dimensional Analysis 8%

9. Medication Dose Calculations 6%

2. Whole Number Operations 16%

4. Unit Conversions 12%

6. Percentages 10%

8. Provider Operations Math 8%

IMPORTANT SCOPE NOTE

Educational examples only. This atlas does not replace local protocols, medication references, device instructions, scope-of-practice requirements, official credentialing test plans, or clinical judgment.



DOMAIN 1 OF 9

Surgical Technology Math

18%
MMM weight

Surgical Technology Math is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

A case begins with 20 counted items and 10 more are added. If 29 are accounted for at closure, how many remain unaccounted for?

SETUP / REASONING

$20 + 10 = 30$ total; subtract $29 = 1$.

ANSWER

1 item

QUICK CHECK

Reconcile the initial count, additions, and accounted items; any nonzero discrepancy requires attention.

DOMAIN 2 OF 9

Whole Number Operations

16%
MMM weight

Whole Number Operations is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

A supply area starts with 24 counted items, adds 18, then uses 11. How many remain?

SETUP / REASONING

$24 + 18 - 11 = 31$.

ANSWER

31 items

QUICK CHECK

Reconcile the starting quantity, additions, and use; the ending count should fit the story.



DOMAIN 3 OF 9

Ratios / Proportions

12%
MMM weight

Ratios / Proportions is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

A 2:5 relationship is maintained. If the second quantity becomes 20, what is the first quantity?

SETUP / REASONING

$$2/5 = x/20; x = 8.$$

ANSWER**8****QUICK CHECK**

Cross-products should agree when the two ratios are truly equivalent.

DOMAIN 4 OF 9

Unit Conversions

12%
MMM weight

Unit Conversions is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

Convert 750 mg to g.

SETUP / REASONING

Use the 1000:1 metric relationship; the result is 0.75 g.

ANSWER**0.75 g****QUICK CHECK**

Confirm the direction of the conversion and that the final unit is exactly the requested unit.



DOMAIN 5 OF 9

Fractions / Decimals

10%
MMM weight

Fractions / Decimals is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

Write $\frac{3}{4}$ as a decimal.

SETUP / REASONING

$\frac{3}{4} = 0.75$.

ANSWER

0.75

QUICK CHECK

For a proper fraction, the decimal should fall between 0 and 1.

DOMAIN 6 OF 9

Percentages

10%
MMM weight

Percentages is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

What is 25% of 80?

SETUP / REASONING

$25\% \times 80 = 20$.

ANSWER

20

QUICK CHECK

The result should be the stated fraction of the whole; compare its magnitude with 0% and 100%.



DOMAIN 7 OF 9

Dimensional Analysis

8%
MMM weight

Dimensional Analysis is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

Available: 10 mg in 2 mL. The ordered dose is 30 mg.
How many mL will deliver the ordered dose?

SETUP / REASONING

$$? \text{ mL} = \frac{2 \text{ mL}}{10 \text{ mg}} \times \frac{30 \text{ mg}}{1} = 6 \text{ mL}$$

ANSWER**6 mL****QUICK CHECK**

Unwanted units should cancel cleanly, leaving only the requested final unit.

DOMAIN 8 OF 9

Provider Operations Math

8%
MMM weight

Provider Operations Math is included because it matches expected quantitative work for this provider level. Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

A device has 600 usable units and consumes 10 units each minute. Ignoring reserve, how many minutes will it run?

SETUP / REASONING

$$600 / 10 = 60 \text{ minutes.}$$

ANSWER**60 min****QUICK CHECK**

A quantity divided by a consumption rate should produce a time or capacity that fits the operating context.



DOMAIN 9 OF 9

6%
MMM weight

Medication Dose Calculations

Medication Dose Calculations is included because it matches expected quantitative work for this provider level.

Surgical-technology scope emphasizes counts, setup, solution, timing, and procedure-support math-not independent medication titration or IV pump management.

EXAMPLE

Available: 10 mg in 2 mL. The ordered dose is 30 mg.
How many mL will deliver the ordered dose?

SETUP / REASONING

$30 \times 2 / 10 = 6 \text{ mL}$.

ANSWER

6 mL

QUICK CHECK

At a fixed concentration, a larger desired dose requires a proportionally larger volume.

REFRESH PRINTED COPIES PERIODICALLY

Provider scope and MedMathMindset instructional weighting may change as the canonical provider-domain layer is updated.