



EMT math, one domain at a time.

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

BLUEPRINT SNAPSHOT

12 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. Oxygen Cylinder Duration 12%

3. Unit Conversions 12%

5. Ratios / Proportions 10%

7. Percentages 8%

9. Fractions / Decimals 6%

11. Weight-Based Dosing 5%

2. Oxygen Delivery 12%

4. Dimensional Analysis 10%

6. Medication Dose Calculations 8%

8. Whole Number Operations 8%

10. BSA / Burns 5%

12. Provider Operations Math 4%

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 12

Oxygen Cylinder Duration

12%
MMM weight

Oxygen Cylinder Duration is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

EXAMPLE

An E cylinder reads 1800 psi. Use a 200 psi reserve and a factor of 0.28. At 4 L/min, approximately how many minutes remain? Round to the nearest minute.

SETUP / REASONING

$(1800 - 200) \times 0.28 / 4 = 112$, about 112 min.

ANSWER

112 min

QUICK CHECK

Subtract the intended reserve before applying the cylinder factor and flow rate.

DOMAIN 2 OF 12

Oxygen Delivery

12%
MMM weight

Oxygen Delivery is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

EXAMPLE

Using the common nasal-cannula estimate of about 24% at 1 L/min plus about 4 percentage points per additional L/min, estimate FiO₂ at 3 L/min.

SETUP / REASONING

$24\% + 2 \times 4\% \approx 32\%$. This is an approximation, not a measured FiO₂.

ANSWER

32 %

QUICK CHECK

Make sure the oxygen quantity and flow use compatible units before dividing.



DOMAIN 3 OF 12

Unit Conversions

12%
MMM weight

Unit Conversions is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 4 OF 12

Dimensional Analysis

10%
MMM weight

Dimensional Analysis is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 5 OF 12

Ratios / Proportions

10%
MMM weight

Ratios / Proportions is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 6 OF 12

Medication Dose Calculations

8%
MMM weight

Medication Dose Calculations is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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.



DOMAIN 7 OF 12

Percentages

8%
MMM weight

Percentages is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 8 OF 12

Whole Number Operations

8%
MMM weight

Whole Number Operations is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 9 OF 12

Fractions / Decimals

6%
MMM weight

Fractions / Decimals is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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 10 OF 12

BSA / Burns

5%
MMM weight

BSA / Burns is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

EXAMPLE

Using $4 \text{ mL} \times \text{kg} \times \% \text{TBSA}$, what is the 24-hour fluid estimate for a 70 kg patient with 20% TBSA?

SETUP / REASONING

$4 \times 70 \times 20 = 5600 \text{ mL}$.

ANSWER

5600 mL

QUICK CHECK

Verify that the formula, body weight, and %TBSA are the intended inputs before interpreting the estimate.



DOMAIN 11 OF 12

Weight-Based Dosing

5%
MMM weight

Weight-Based Dosing is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

EXAMPLE

A 70 kg patient is ordered 0.1 mg/kg. What dose is ordered?

SETUP / REASONING

$$70 \times 0.1 = 7 \text{ mg.}$$

ANSWER

7 mg

QUICK CHECK

Check that the weight unit matches the dose unit before multiplying.

DOMAIN 12 OF 12

Provider Operations Math

4%
MMM weight

Provider Operations Math is included because it matches expected quantitative work for this provider level. EMT scope emphasizes oxygen logistics, simple medication support, burns/BSA, and field operations; advanced infusion/titration domains are excluded.

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.

REFRESH PRINTED COPIES PERIODICALLY

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