



MEDMATHMINDSET PROVIDER MATH ATLAS

Polysomnography 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. Polysomnography Math 32%

3. Percentages 12%

5. Clinical Index / Score Interpretation 8%

7. Ratios / Proportions 8%

9. Whole Number Operations 5%

2. Oxygen Delivery 12%

4. Unit Conversions 10%

6. Provider Operations Math 8%

8. Fractions / Decimals 5%

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

Polysomnography Math

32%
MMM weight

Polysomnography Math is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

EXAMPLE

30 scored respiratory events occur during 6 hours of sleep. What is the AHI?

SETUP / REASONING

$AHI = 30 / 6 = 5 \text{ events/hr.}$

ANSWER

5 events/hr

QUICK CHECK

An index is events divided by actual hours of sleep/observation; verify the denominator before interpreting the rate.

DOMAIN 2 OF 9

Oxygen Delivery

12%
MMM weight

Oxygen Delivery is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

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 9

Percentages

12%
MMM weight

Percentages is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

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 4 OF 9

Unit Conversions

10%
MMM weight

Unit Conversions is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

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

Clinical Index / Score Interpretation

8%
MMM weight

Clinical Index / Score Interpretation is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

EXAMPLE

24 events occur during 6 hours. What is the event index per hour?

SETUP / REASONING

$24 / 6 = 4$ events/hr.

ANSWER

4 events/hr

QUICK CHECK

An index is a rate: confirm both the numerator and the time/exposure denominator.

DOMAIN 6 OF 9

Provider Operations Math

8%
MMM weight

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EXAMPLE

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

SETUP / REASONING

$600 / 10 = 60$ 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 7 OF 9

Ratios / Proportions

8%
MMM weight

Ratios / Proportions is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

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 8 OF 9

Fractions / Decimals

5%
MMM weight

Fractions / Decimals is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

EXAMPLE

Write $3/4$ as a decimal.

SETUP / REASONING

$$3 / 4 = 0.75.$$

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

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



DOMAIN 9 OF 9

5%
MMM weight

Whole Number Operations

Whole Number Operations is included because it matches expected quantitative work for this provider level. Polysomnography scope emphasizes scoring indices, sleep study math, PAP/oxygen therapy context, and respiratory event interpretation-not infusion math.

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.

REFRESH PRINTED COPIES PERIODICALLY

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