

Matthie Recalculation Path

Geometry and Measurement II

Student Forms

Use one form when a specific misconception needs confirmation or a fresh recheck. Each chapter begins on a new page, and each page contains two editable student forms.

32 forms • 8 chapters • 2 forms per page

MATTHIE ASSESSMENT MATHEMATICS EDUCATION SERIES • RECALCULATION PATH

ROUTE FINDER

GM2-C01-Q1

Chapter 1 | Pythagorean Theorem I: The Meaning

Name: _____ Grade: _____ Date: _____

What is 8^2 ? Write the multiplication that the exponent represents.*Calculate and show the meaning of the exponent.*

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MATTHIE ASSESSMENT MATHEMATICS EDUCATION SERIES • RECALCULATION PATH

TRIPWIRE

GM2-C01-Q2

Chapter 1 | Pythagorean Theorem I: The Meaning

Name: _____ Grade: _____ Date: _____

A right triangle has legs of 6 cm and 8 cm. Maya writes: $c^2 = 6^2 + 8^2 = 100$, so $c = 100$ cm. Is Maya correct? Identify the error and give the correct hypotenuse.*Check each step, correct the work, and explain the error.*

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CONFIRMATION**GM2-C01-Q3****Chapter 1 | Pythagorean Theorem I: The Meaning**

Name: _____ Grade: _____ Date: _____

A right triangle has legs of 5 cm and 12 cm. Find the hypotenuse.*Show the Pythagorean relationship and include the unit.*

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ROAD TEST**GM2-C01-Q4****Chapter 1 | Pythagorean Theorem I: The Meaning**

Name: _____ Grade: _____ Date: _____

Evaluate 4^2 . Write the multiplication that 4^2 represents.*Show the multiplication and result.*

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ROUTE FINDER

GM2-C02-Q1

Chapter 2 | Pythagorean Theorem II: Applications and the Converse

Name: _____ Grade: _____ Date: _____

In a right triangle, is the hypotenuse always the longest side? Explain briefly.*Answer and state the defining feature of the hypotenuse.*

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TRIPWIRE

GM2-C02-Q2

Chapter 2 | Pythagorean Theorem II: Applications and the Converse

Name: _____ Grade: _____ Date: _____

A triangle has side lengths 8 cm, 15 cm, and 17 cm. Jordan writes: $8^2 + 15^2 = 17$, so the triangle is not right. Is Jordan correct? Correct the test and decide whether the triangle is right.*Use the converse of the Pythagorean theorem and explain the error.*

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CONFIRMATION**GM2-C02-Q3****Chapter 2 | Pythagorean Theorem II: Applications and the Converse**

Name: _____ Grade: _____ Date: _____

A right triangle has a hypotenuse of 13 m and one leg of 5 m. Find the other leg.*Show the equation, isolate the missing length, and include the unit.*

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ROAD TEST**GM2-C02-Q4****Chapter 2 | Pythagorean Theorem II: Applications and the Converse**

Name: _____ Grade: _____ Date: _____

A right triangle has legs of 7 cm and 24 cm. Find the length of the hypotenuse.*Show the Pythagorean relationship and include the unit.*

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ROUTE FINDER

GM2-C03-Q1

Chapter 3 | Three-Dimensional Objects and Nets

Name: _____ Grade: _____ Date: _____

Is a rectangle two-dimensional or three-dimensional? Give one reason.*Name the dimension and explain briefly.*

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MATTHIE ASSESSMENT MATHEMATICS EDUCATION SERIES • RECALCULATION PATH

TRIPWIRE

GM2-C03-Q2

Chapter 3 | Three-Dimensional Objects and Nets

Name: _____ Grade: _____ Date: _____

A student says, “A cylinder is a prism because it has two congruent, parallel bases.” Is the student correct? Use the shapes of the bases and the surfaces in your explanation.*Decide whether the claim is correct and explain using geometric features.*

CONFIRMATION

GM2-C03-Q3

Chapter 3 | Three-Dimensional Objects and Nets

Name: _____ Grade: _____ Date: _____

Name the solid that has two circular bases and one curved surface.

Name the solid and connect the name to its features.

CUT OR SEPARATE HERE

ROAD TEST

GM2-C03-Q4

Chapter 3 | Three-Dimensional Objects and Nets

Name: _____ Grade: _____ Date: _____

A solid has 6 congruent square faces. Name the solid.

Name the solid and identify its defining faces.

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ROUTE FINDER

GM2-C04-Q1

Chapter 4 | Surface Area of Prisms

Name: _____ Grade: _____ Date: _____

What does area measure? State the type of unit used.*Describe the measurement and its unit type.*

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MATTHIE ASSESSMENT MATHEMATICS EDUCATION SERIES • RECALCULATION PATH

TRIPWIRE

GM2-C04-Q2

Chapter 4 | Surface Area of Prisms

Name: _____ Grade: _____ Date: _____

A cube has side length 5 cm. A student writes: surface area = $5^2 = 25 \text{ cm}^2$. Is the student correct? Correct the calculation and explain what was missed.*Account for every face, correct the work, and include square units.*

CONFIRMATION

GM2-C04-Q3

Chapter 4 | Surface Area of Prisms

Name: _____ Grade: _____ Date: _____

Find the surface area of a cube with side length 4 cm.

Show how all faces are included and use square units.

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ROAD TEST

GM2-C04-Q4

Chapter 4 | Surface Area of Prisms

Name: _____ Grade: _____ Date: _____

Find the surface area of a cube with side length 3 cm.

Show how all faces are included and use square units.

ROUTE FINDER

GM2-C05-Q1

Chapter 5 | Surface Area of Cylinders and Composite Solids

Name: _____ Grade: _____ Date: _____

What does circumference measure? State the type of unit used.

Describe the measurement and its unit type.

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TRIPWIRE

GM2-C05-Q2

Chapter 5 | Surface Area of Cylinders and Composite Solids

Name: _____ Grade: _____ Date: _____

A closed cylinder has radius 3 cm and height 4 cm. A student uses $2\pi rh$ and reports $24\pi\text{ cm}^2$ as the total surface area. Is the student correct? Correct the work and explain what is missing.

Include the curved surface and both circular bases; use square units.

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CONFIRMATION**GM2-C05-Q3****Chapter 5 | Surface Area of Cylinders and Composite Solids**

Name: _____ Grade: _____ Date: _____

Find the surface area of a closed cylinder with radius 2 cm and height 5 cm. Use $\pi \approx 3.14$.*Show the curved surface and both bases; use square units.*

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ROAD TEST**GM2-C05-Q4****Chapter 5 | Surface Area of Cylinders and Composite Solids**

Name: _____ Grade: _____ Date: _____

Find the surface area of a closed cylinder with radius 2 cm and height 7 cm. Use $\pi \approx 3.14$.*Show the curved surface and both bases; use square units.*

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ROUTE FINDER

GM2-C06-Q1

Chapter 6 | Volume of Prisms and Cylinders

Name: _____ Grade: _____ Date: _____

What does volume measure? State the type of unit used.*Describe the measurement and its unit type.*

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TRIPWIRE

GM2-C06-Q2

Chapter 6 | Volume of Prisms and Cylinders

Name: _____ Grade: _____ Date: _____

A rectangular prism measures 4 cm by 3 cm by 2 cm. A student adds $4 + 3 + 2$ and reports a volume of 9 cm^3 . Is the student correct? Correct the calculation and explain the error.*Use the three dimensions correctly and include cubic units.*

CONFIRMATION

GM2-C06-Q3

Chapter 6 | Volume of Prisms and Cylinders

Name: _____ Grade: _____ Date: _____

Find the volume of a rectangular prism measuring 6 cm by 4 cm by 5 cm.

Show the volume calculation and use cubic units.

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ROAD TEST

GM2-C06-Q4

Chapter 6 | Volume of Prisms and Cylinders

Name: _____ Grade: _____ Date: _____

Find the volume of a rectangular prism measuring 4 cm by 3 cm by 2 cm.

Show the volume calculation and use cubic units.

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ROUTE FINDER

GM2-C07-Q1

Chapter 7 | Volume of Pyramids, Cones, Spheres, and Capacity

Name: _____ Grade: _____ Date: _____

What is the difference between the vertical height and the slant height of a pyramid or cone?*Describe where each height is measured.*

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MATTHIE ASSESSMENT MATHEMATICS EDUCATION SERIES • RECALCULATION PATH

TRIPWIRE

GM2-C07-Q2

Chapter 7 | Volume of Pyramids, Cones, Spheres, and Capacity

Name: _____ Grade: _____ Date: _____

A square pyramid has base area 36 cm^2 and vertical height 9 cm. A student uses $V = Bh$ and reports 324 cm^3 . Is the student correct? Correct the calculation and explain the error.*Use the pyramid volume relationship and include cubic units.*

CONFIRMATION

GM2-C07-Q3

Chapter 7 | Volume of Pyramids, Cones, Spheres, and Capacity

Name: _____ Grade: _____ Date: _____

Find the volume of a square pyramid with base area 30 cm² and vertical height 9 cm.

Show the pyramid volume calculation and use cubic units.

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ROAD TEST

GM2-C07-Q4

Chapter 7 | Volume of Pyramids, Cones, Spheres, and Capacity

Name: _____ Grade: _____ Date: _____

A square pyramid has a base side length of 6 cm and a vertical height of 9 cm. Find its volume.

First find the base area, then use the pyramid volume relationship and cubic units.

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ROUTE FINDER

GM2-C08-Q1

Chapter 8 | Mixed Geometry and Measurement Problem Solving

Name: _____ Grade: _____ Date: _____

A fence goes around a garden. Does this situation require perimeter or area? Explain briefly.*Choose the measurement that matches the boundary.*

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TRIPWIRE

GM2-C08-Q2

Chapter 8 | Mixed Geometry and Measurement Problem Solving

Name: _____ Grade: _____ Date: _____

A rectangular yard is 8 m long and 5 m wide. A student multiplies 8×5 and says 40 m^2 of fencing is needed. Is the student correct? Correct the work and explain the measurement and unit needed.*Choose the correct measurement, calculate it, and use the correct unit type.*

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CONFIRMATION**GM2-C08-Q3****Chapter 8 | Mixed Geometry and Measurement Problem Solving**

Name: _____ Grade: _____ Date: _____

A garden needs fencing. Name the measurement needed and state whether the answer uses linear, square, or cubic units.

Name the measurement and the unit type; explain briefly.

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ROAD TEST**GM2-C08-Q4****Chapter 8 | Mixed Geometry and Measurement Problem Solving**

Name: _____ Grade: _____ Date: _____

**A fence will be placed around a rectangular yard. Which measurement is needed, perimeter or area?
State the type of unit the answer should use.**

Choose the measurement and unit type; explain briefly.
