



PRINTABLES
PREMIUM EDUCATIONAL RESOURCES

GRADE 6 • CCSS ALIGNED • FULL-YEAR BUNDLE

Math Error Analysis

Find • Fix • Reflect

80 Printable Task Cards Across All 5 CCSS Domains

RP • NS • EE • G • SP

80 Task Cards	Answer Key + Reflections	5 Anchor Charts	CCSS Chart
Recording Sheet	28 Vector Diagrams	Teacher Guide	

80	28	3	100%
Error-Analysis Tasks	Vector Diagrams	Steps per Task: Identify • Fix • Reflect	Math Accuracy Verified

UM Printables

Premium Educational Resources

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TEACHER GUIDE

Five Ways to Use This Bundle

Practical implementation strategies for every classroom routine — warm-ups, stations, homework, early finishers, and sub plans.

Error analysis is one of the most powerful tools in a Grade 6 math classroom. When students examine a fictional peer's incorrect work, name the specific mistake, and correct it, they build the kind of **metacognitive awareness** that prevents the same mistake from recurring in their own work. This bundle gives you **80 ready-to-print task cards** organized across all five Grade 6 CCSS domains (RP, NS, EE, G, SP), each anchored in a real-world context and structured around the three-step **Identify → Fix → Reflect** routine.

The three-step routine is intentional. **Identify** forces the student to categorize the error by name — research shows that naming a misconception is the single most effective way to overcome it. **Fix** asks the student to produce correct work, which builds procedural fluency and proof-writing habits. **Reflect** asks the student to articulate a personal tip for avoiding the mistake, which transfers the learning to long-term memory. Together, the three steps convert a one-line answer into a 5-to-7-minute reasoning routine.

STRATEGY 1 · Warm-Up / Do-Now (5-7 min)

WHY THIS WORKS

Start each class with one error-analysis card projected on the board. Students complete the Identify/Fix/Reflect routine independently in the first 5-7 minutes of class, then turn-and-talk with a neighbor to compare reflections. This routine signals that reasoning matters more than speed and surfaces misconceptions before they compound.

HOW TO IMPLEMENT

Print a domain at a time (16 cards). Project one card. Students write their three-part response in a dedicated section of their math notebook (or on the recording sheet, p. XX). After 5 minutes, call on two students to share their reflection. Track which error types recur and re-teach as needed.

TIP

PRO TIP: Keep a tally of error-type mentions across the week. If 'Decimal Misalignment' appears three times, schedule a 10-minute mini-lesson on aligning decimals for the following Monday.

STRATEGY 2 · Math Stations (12-15 min per station)



ROUTINE

The Identify · Fix · Reflect Routine

Every task card follows the same three-step structure. Teach this routine once and your students will be able to pick up any card in the bundle and know exactly what to do.

1 IDENTIFY Name the error type. Read the fictional student's handwritten work. Decide what kind of mistake the student made — for example, 'Addition Instead of Multiplication' or 'Decimal Point Misalignment'. Use the Error-Type Anchor Chart for your domain as a reference.	2 FIX Show correct work. Re-work the problem correctly in the Fix box. Show every step — do not just write the final answer. Use the same format the fictional student used so the contrast is clear, and label units when applicable.	3 REFLECT Write a personal tip. In one or two sentences, write a tip you would give yourself to avoid making the same mistake. The tip should be specific and actionable — not 'be careful' but 'always line up the decimal points before adding'.
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WORKED EXAMPLE

Here is what a completed task looks like. Use this as a model answer-key when teaching the routine to your class for the first time.

TASK	Ratio Tables	6.RP.A.3a
EX-01	Error type: Addition Instead of Multiplication	

CONTEXT: A lemonade recipe uses 2 cups of lemon juice to 5 cups of water. Marcus is filling out a ratio table to scale the recipe for a school fundraiser.

TASK: Complete the ratio table for 2 lemons : 5 water.

MARIA'S WORK (THE FICTIONAL STUDENT)

REFERENCE

CCSS Alignment Chart

Every task in this bundle maps to a Grade 6 Common Core State Standard. Use this chart to plan unit coverage, select cards for re-teaching, or document standards addressed for your lesson plans.

DOMAIN RP · Ratios & Proportional Relationships

TASK	SUB-STANDARD CLUSTER	CCSS	ERROR TYPE	STANDARD DESCRIPTION
RP-01	Ratio Tables	6.RP.A.3a	Addition Instead of Multiplication	Make tables of equivalent ratios.
RP-02	Ratio Tables	6.RP.A.3a	Inconsistent Multiplier Across Columns	Make tables of equivalent ratios.
RP-03	Ratio Tables	6.RP.A.3a	Additive Scaling of a Quantity	Make tables of equivalent ratios.
RP-04	Ratio Tables	6.RP.A.3a	Reversed Column Order	Make tables of equivalent ratios.
RP-05	Unit Rate	6.RP.A.2	Dividing in the Wrong Order	Understand the concept of a unit rate.
RP-06	Unit Rate	6.RP.A.2	Restating the Ratio Instead of Computing	Understand the concept of a unit rate.
RP-07	Unit Rate	6.RP.A.3b	Confusing a Ratio with a Unit Rate	Solve unit-rate problems including unit pricing.
RP-08	Unit Rate	6.RP.A.3b	Mismatched Unit Labels	Solve unit-rate problems including unit pricing.
RP-09	Percent of a Quantity	6.RP.A.3c	Treating Percent as a Whole Number	Find a percent of a quantity as a rate per 100.
RP-10	Percent of a Quantity	6.RP.A.3c	Using the Percent Number as the Answer	Find a percent of a quantity as a rate per 100.
RP-11	Percent of a Quantity	6.RP.A.3c	Confusing Amount with Percent Increase	Find a percent of a quantity as a rate per 100.
RP-12	Percent of a Quantity	6.RP.A.3c	Finding Percent of the Wrong Number	Find a percent of a quantity as a rate per 100.
RP-13	Ratio Reasoning	6.RP.A.3d	Additive Instead of Multiplicative Scaling	Use ratio reasoning to convert measurement units.
RP-14	Ratio Reasoning	6.RP.A.3a	Incomplete Cross-Multiplication	Make tables of equivalent ratios.
RP-15	Ratio Reasoning	6.RP.A.3c	Comparing Ratios Without a Common Unit	Find a percent of a quantity as a rate per 100.
RP-16	Ratio Reasoning	6.RP.A.3d	Mixing Up Part-to-Part and Part-to-Whole	Use ratio reasoning to convert measurement units.



G — Geometry

8 COMMON ERROR TYPES IN THIS DOMAIN

1 Triangle Area — Forgetting to Divide by 2 Looks like: Computing triangle area as $\text{base} \times \text{height}$ instead of $\frac{1}{2} \times \text{base} \times \text{height}$. Fix: Triangle area = $(1/2) \times b \times h$. A triangle is <i>HALF</i> of a rectangle with the same base and height.	2 Using the Wrong Dimension as Height Looks like: Using a slanted side as the height instead of the perpendicular height. Fix: The height in any area formula must be <i>PERPENDICULAR</i> to the base (at a 90° angle).
3 Trapezoid Area — Missing the (1/2) and the Sum Looks like: Multiplying $b_1 \times b_2 \times h$ instead of $(1/2)(b_1 + b_2)h$. Fix: Trapezoid area = $(1/2) \times (\text{SUM of bases}) \times \text{height}$ = average of bases $\times$ height.	4 Composite Figure — Subtracting a Non-Existent Overlap Looks like: Subtracting an 'overlap' that does not exist (the parts share only a corner point or edge, not area). Fix: Subtract only when parts actually <i>OVERLAP</i> (share an area). Sharing a corner or edge means just <i>ADD</i> the parts.
5 Counting Only 4 Faces of a Rectangular Prism Looks like: Forgetting one of the three pairs of faces when computing surface area. Fix: A rectangular prism has 6 faces in 3 pairs: $2lw + 2lh + 2wh$.	6 Using the Wrong Net Dimensions Looks like: Confusing an edge length with a face area in a net. Fix: Each face's area = length $\times$ width of that face. Compute each face area, then add.
7 Confusing Surface Area with Volume Looks like: Computing $l \times w \times h$ when the problem asks for surface area (or vice versa). Fix: Volume = $l \times w \times h$ (cubic units, fills inside). SA = $2(lw + lh + wh)$ (square units, covers outside).	8 Mixing Units (cm vs. m) in Volume Looks like: Using different units for length, width, and height without converting. Fix: Convert ALL dimensions to the <i>SAME</i> unit before computing volume or surface area.

TIP

Display this chart in your classroom while students work through the G domain task cards. When a student reads a fictional peer's incorrect work, they should consult this chart to NAME the error type precisely. Naming the error by its category is the first step in the Identify-Fix-Reflect routine and is the most powerful predictor of long-term retention.

EE	Expressions & Equations	16 cards	Order of Operations · Distributive Property · Equations · Inequalities
G	Geometry	16 cards	Area Formulas · Surface Area & Nets · Volume · Coordinate Geometry
SP	Statistics & Probability	16 cards	Statistical Questions · Center & MAD · Box Plots · Distribution

TIP

EACH OF THE NEXT 80 PAGES IS ONE TASK CARD. Each card has the same structure: a colored header with the task ID and CCSS code, the real-world context, the task prompt, the fictional student's incorrect work in handwriting font, and three labelled sections (Identify, Fix, Reflect) with writing space. Print one card per student, or project on the board for whole-class instruction.

TASK

Ratio Tables

6.RP.A.3a

RP-01

Error type: Addition Instead of Multiplication

REAL-WORLD CONTEXT

A lemonade recipe uses 2 cups of lemon juice for every 5 cups of water. Marcus is filling out a ratio table to scale the recipe for a school fundraiser.

TASK

Complete the ratio table for 2 lemon : 5 water so Marcus can serve 4×, 6×, and 8× the recipe.

MARCUS'S WORK (THE FICTIONAL STUDENT)

MARCUS'S WORK (INCORRECT)

Lemons	Water
2	5
4	7
6	9
8	11

YOUR JOB: IDENTIFY · FIX · REFLECT

- IDENTIFY** What error type did Marcus make? (Use the anchor chart to name it.)
- FIX** Re-work the problem correctly. Show every step.
- REFLECT** Write a personal tip to avoid this mistake next time. Be specific and actionable — not 'be careful.'

TASK
G-09

Volume

Error type: Using Surface Area Formula for Volume

6.G.A.2

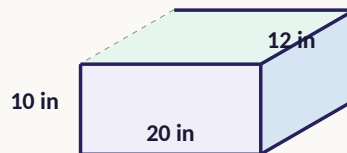
REAL-WORLD CONTEXT

David is filling a fish tank shaped like a rectangular prism with dimensions 20 in $\times$ 12 in $\times$ 10 in. He is computing the volume to know how much water the tank holds.

TASK

Use the figure shown to find the volume of the fish tank (20 $\times$ 12 $\times$ 10).

FIGURE



Fish tank (rectangular prism): 20 in $\times$ 12 in $\times$ 10 in. Volume fills the INSIDE.

DAVID'S WORK (THE FICTIONAL STUDENT)

DAVID'S WORK (INCORRECT)

$$\begin{aligned} V &= 2(lw + lh + wh) \\ &= 2(20 \times 12 + 20 \times 10 + 12 \times 10) \\ &= 2(240 + 200 + 120) \\ &= 2(560) \\ &= 1,120 \text{ in}^3 \end{aligned}$$

YOUR JOB: IDENTIFY • FIX • REFLECT

1 IDENTIFY What error type did David make? (Use the anchor chart to name it.)

2 FIX Re-work the problem correctly. Show every step.

3 REFLECT Write a personal tip to avoid this mistake next time. Be specific and actionable — not 'be careful.'

TASK

SP-13

Data Distribution

Error type: Describing Shape — Confusing 'Symmetric' with 'Uniform'

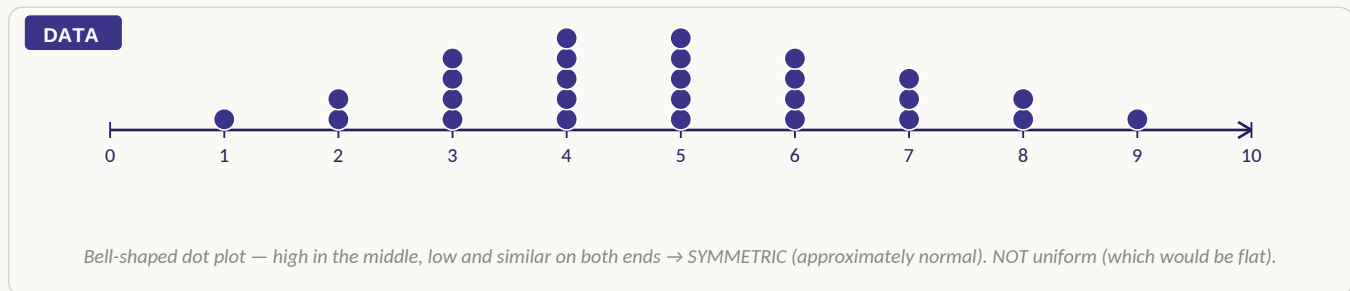
6.SP.A.2

REAL-WORLD CONTEXT

Sophie's class recorded their scores on a recent quiz. The dot plot is shown below. Sophie is describing the shape of the distribution.

TASK

Use the dot plot shown. What is the shape of the distribution? Sophie called it 'uniform' — identify her error.



SOPHIE'S WORK (THE FICTIONAL STUDENT)

SOPHIE'S WORK (INCORRECT)

The dot plot is highest in the middle and lower on the sides.

This is UNIFORM because both sides look similar.

YOUR JOB: IDENTIFY · FIX · REFLECT

- 1 IDENTIFY** What error type did Sophie make? (Use the anchor chart to name it.)
- 2 FIX** Re-work the problem correctly. Show every step.
- 3 REFLECT** Write a personal tip to avoid this mistake next time. Be specific and actionable — not 'be careful.'

ANSWER KEY

RP-01

RATIO TABLES

Addition Instead of Multiplication

6.RP.A.3a

CONTEXT

A lemonade recipe uses 2 cups of lemon juice for every 5 cups of water. Marcus is filling out a ratio table to scale the recipe for a school fundraiser.

TASK

Complete the ratio table for 2 lemon : 5 water so Marcus can serve 4×, 6×, and 8× the recipe.

1 IDENTIFY

Error type:

Addition Instead of Multiplication

Why it's wrong:

Marcus added 2 to the lemon column and 2 to the water column each row. Equivalent ratios must be formed by MULTIPLYING both quantities by the SAME number. Adding breaks the ratio because 2:5 is not equal to 4:7.

2 FIX

Correct work:

Scale by 2, 3, and 4:

Row 2: $2 \times 2 = 4$, $5 \times 2 = 10 \rightarrow 4 : 10$

Row 3: $2 \times 3 = 6$, $5 \times 3 = 15 \rightarrow 6 : 15$

Row 4: $2 \times 4 = 8$, $5 \times 4 = 20 \rightarrow 8 : 20$

Final table: (2,5), (4,10), (6,15), (8,20).
Each row simplifies to 2:5.

3 REFLECT

Exemplar reflection:

Equivalent ratios come from multiplying or dividing both numbers by the same value. Adding the same number to each column does NOT keep the ratio equal.

FICTIONAL STUDENT'S INCORRECT WORK (FOR TEACHER REFERENCE)

MARCUS'S WORK (INCORRECT)

Lemons / Water

2 / 5

4 / 7

6 / 9

8 / 11

WHAT'S INSIDE THIS BUNDLE

Grade 6 Math Error Analysis — Full-Year Bundle

Find · Fix · Reflect — 80 Tasks Across 5 CCSS Domains

Total resource: 184 pages · Vector-quality printables

Teacher Guide 2 pp Pedagogy overview, error-type taxonomy, classroom pacing suggestions.	How to Use 2 pp Step-by-step implementation: Identify · Fix · Reflect framework.	CCSS Alignment Chart 6 pp Every task mapped to a Grade 6 standard across RP, NS, EE, G, SP.	
Anchor Charts 5 charts One per domain (RP, NS, EE, G, SP) — print-and-post reference.	Task Cards 80 cards 16 per domain — each with real-world context + categorized error type.	Vector Diagrams 28 figures Geometric shapes, nets, coordinate planes, dot plots, bar graphs, number lines.	
Recording Sheet 2 pp Reusable student workspace for Identify · Fix · Reflect.	Answer Key 80 pp Full solutions, corrected work, and reflection exemplars for every task.	Review Request 1 p Polished closing page inviting TpT feedback and Q&A.	
80 Error-Analysis Tasks	5 CCSS Domains (RP·NS·EE·G·SP)	28 Vector Diagrams	184 Total Pages

DOMAIN BREAKDOWN — 16 TASKS PER DOMAIN

RP	Ratios & Proportional Relationships	6.RP.A.1 – 6.RP.A.3d
NS	The Number System	6.NS.A.1 – 6.NS.C.8
EE	Expressions & Equations	6.EE.A.1 – 6.EE.B.8
G	Geometry	6.G.A.1 – 6.G.A.4
SP	Statistics & Probability	6.SP.A.1 – 6.SP.B.5d