



Diagnostic Guide

Grade 5

What this document covers

Section 1 Diagnostic Assessment Interface.

Section 2 Guide to Diagnostic Skill Entry Points (Tables 1–3).

Overview and Purpose

The Beginning-of-Year (BOY) Screener is a targeted diagnostic assessment consisting of 21 questions designed to evaluate student mastery of prerequisite standards from the prior grade level. For Grade 5, the screener specifically assesses Grade 4 TEKS to determine each student's readiness for on-grade-level instruction.

This diagnostic tool serves three primary functions:

1. **Snapshot of Readiness:** Measures student mastery of the previous grade's standards to establish a baseline for instruction.
2. **Actionable Insights:** Highlights specific strengths and areas of growth for both whole-class planning and individual student intervention.
3. **Automated Recommendations:** Assessment data automatically generates initial Practice Mode recommendations, assigning the specific skill entry points and interventions detailed in this guide.

How to Use This Guide

Based on the actionable insights generated by the screener, educators should use the following tables to identify and assign the appropriate skill entry points and interventions:

- **For Targeted Practice (Table 1):** Assign these Practice Cards for students who need a focused refresher on specific discrete skills (e.g., below 70% proficiency on individual questions). These can be used for independent work, station activities, or homework.
- **For Comprehensive Reteaching (Table 2):** Use these Grade 4 instructional chapters and sections for students demonstrating significant gaps across an entire domain (e.g., below 50% proficiency). These resources provide the conceptual foundation and guided instruction necessary to rebuild understanding before attempting Grade 5 content.
- **For Vertical Alignment (Table 3):** Refer to this matrix to see how each prerequisite skill connects to upcoming Grade 5 TEKS and chapters. Use this to prioritize interventions that are most critical for the specific Grade 5 content currently being taught.

Section 1: Diagnostic Assessment Interface

The figure below demonstrates the teacher's view of the Grade 5 BOY Screener. This digital interface captures the student response data necessary to generate the recommended skill entry points and interventions detailed in Tables 1, 2, and 3.

Figure 1. Grade 5 Beginning-of-Year Diagnostic Screener — Teacher View

Texas Screeners > Grade 5 > ☐ Grade 5 - BOY - TX

☐ Mild

1. The expanded notation of a number is written:
 $5 \times 10,000,000 + 6 \times 100,000 + 9 \times 10,000 + 1 \times 1,000 + 3 \times 100 + 2 \times 1$
 What is the number?

2. Select the expanded notation of the number 43.76.
 A. $4 \times 10 + 3 \times 1 + 7 \times 0.1 + 6 \times 0.1$
 B. $4 \times 10 + 3 \times 1 + 7 \times 0.1 + 6 \times 0.01$
 C. $4 \times 10 + 3 \times 1 + 7 \times 1 + 6 \times 1$

☐ A
 ☒ B
 ☐ C

3. Write the decimal 0.58 as a fraction.

4. Compare the fractions using $<$, $>$, or $=$.

$$\frac{5}{8} \text{ — } \frac{3}{4}$$

☒ $<$
☐ $>$
☐ $=$

5. Solve the addition with the help of the fraction models.

$$\frac{3}{4} + \frac{3}{4}$$

Answer as an improper fraction.

6. Solve the subtraction with the help of the fraction models.

$$\frac{7}{5} - \frac{3}{5}$$

Answer as a fraction.

8. Add.
 $5.22 + 3.71$

9. Subtract.
 $0.46 - 0.08$

10. A box of math books contains 24 books. A school orders 13 boxes for all their classrooms.
 How many math books does the school receive?

11. A farmer harvested 60 pumpkins. He gave 7 to a neighbor and then shared the rest equally among 6 vendors at the farmer's market.
 How many were left over if each stand got the same number of pumpkins?

12. Elena is saving money to buy a bicycle. She earned \$45 by babysitting and \$30 from doing chores. Then she spent \$18 on school supplies.
 Write an equation to represent how much money Elena has left. Let x represent the amount she has left. Do not simplify.

15. Liam is setting up a tent for a camping trip. He wants to place a tarp on the ground that will cover the entire floor of the tent.
 The floor of the tent is shaped like a rectangle with a length of 7 feet and a width of 5 feet.
 What is the perimeter of the tent's floor?

16. Select the two parallelograms.

A
C

B
D

☒ A
 ☐ B
 ☐ C
 ☒ D

17. Determine if triangle ABC is acute, right, or obtuse.

☐ Acute
 ☐ Right
 ☒ Obtuse

18. Find the measure of the angle in degrees using the protractor tool.

7. Subtract.
 $25,340 - 5,430$

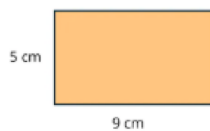
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13. A laundry service charges \$4 per basket to fold clothes. The relation is represented in the table. Fill in the missing values in the table. What number should replace C?

Number of baskets	Total Cost (\$)
1	4
3	12
A	20
B	28
9	C

36

14. Find the area of the given rectangle.



45 cm²

19. Jamal is taking a bus. His bus left the station at 2 : 15 PM and arrived at his destination at 4 : 40 PM.

How long was Jamal's bus ride?

- A. 2 hours and 25 minutes
B. 2 hours and 15 minutes
C. 2 hours and 35 minutes
D. 2 hours and 5 minutes



A

B

C

D

20. Mikaela has 8 juice boxes, and each holds 250 milliliters of juice.

How many milliliters of juice does Mikaela have in total?



2000 ml

21. Ms. Alvarez gave a math quiz to her 8th-grade class. After grading, she recorded all the scores out of 80 for her 16 students:

42, 46, 47, 51, 53, 53, 55, 58, 61, 62, 64, 66, 68, 70, 71, 75

Fill in the empty stem-and-leaf plot using the data.

How many students scored in the 60s?

Stem	Leaf

5

Section 2: Guide to Diagnostic Skill Entry Points

Table 1: Diagnostic Intervention Guide — Recommended Practice Cards

This table maps each diagnostic question to targeted Practice Cards within the curriculum. These resources are designed for immediate, focused intervention—allowing students to practice the specific discrete skills identified as gaps (e.g., below 70% proficiency) without pausing the entire class for a full reteach. Teachers can assign these cards as independent work, station activities, or homework to efficiently close skill gaps.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 4)	Recommended Practice Cards
Number System and Place Value	Q1, Q2	4.2.B	- Determine place value in numbers up to 99,999 - Write decimals in expanded form to thousandths
	Q3	4.2.G	Convert decimals to fractions with denominator 10 or 100
Fractions and Rational Numbers	Q4	4.3.D	Compare fractions with unlike denominators
	Q5, Q6	4.3.E	- Add fractions with like denominators - Subtract fractions with same denominators
Operations	Q7, Q8, Q9	4.4.A	- Subtract multi-digit numbers - Add decimals to hundredths - Subtract decimals to hundredths
	Q10, Q11	4.4.H	Solve 2-step word problems using multiplication and division
Algebraic Reasoning	Q12	4.5.A	Solve multistep word problems with multi-digit numbers
	Q13	4.5.B	Identify number patterns and rules
Geometry and Measurement	Q14, Q15	4.5.D	- Calculate rectangle area with whole number sides - Find perimeter of rectangles
	Q16, Q17	4.6.D	Classify 2-D shapes by parallel or perpendicular lines
	Q18	4.7.C	Measure angles with protractor
	Q19, Q20	4.8.C	- Solve money word problems with all operations - One-step word problems with volume
Data Analysis	Q21	4.9.A	Create line plots with halves, fourths, and eighths

Table 2: Prerequisite Reteach Guide — Grade 4 Instructional Alignment

For students demonstrating significant gaps (e.g., below 50% proficiency) across an entire domain, targeted practice alone may not be sufficient. This table directs educators to the full Grade 4 instructional chapters and sections required for deep reteaching. These resources provide the conceptual foundation and guided instruction necessary to rebuild prerequisite understanding before students attempt Grade 5 content.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 4)	Recommended Chapter	Recommended Sections
Number System and Place Value	Q1, Q2	4.2.B	Understanding Place Value of Whole Numbers	- Place value of decimals to hundredths - Place value of multi-digit whole numbers
	Q3	4.2.G	Understanding Decimals	Relating fractions and decimals
Fractions and Rational Numbers	Q4	4.3.D	Fractions	Comparing fractions
	Q5, Q6	4.3.E	Fractions	- Adding and subtracting mixed numbers, same denominator - Adding fractions, same denominator - Subtracting fractions, same denominator
Operations	Q7, Q8, Q9	4.4.A	Adding and Subtracting	- Adding decimals to hundredths - Adding multi-digit whole numbers - Subtracting decimals to hundredths - Subtracting multi-digit whole numbers
	Q10, Q11	4.4.H	Multiplication and Division of Whole Numbers	- Multistep word problems with remainder - Representations of remainders - Two-step word problems
Algebraic Reasoning	Q12	4.5.A	Multistep Problems	- Multistep word problems with remainder - Two-step word problems - Word problems as equations with unknown
	Q13	4.5.B	Patterns, Perimeter, and Area	- Numerical patterns as input-output tables - Shape patterns
Geometry and Measurement	Q14, Q15	4.5.D	Patterns, Perimeter, and Area	- Area of rectangles - Perimeter of polygons
	Q16, Q17	4.6.D	2D Shapes	- Classifying triangles by angles - Quadrilaterals
	Q18	4.7.C	Angles and Circles	Measuring angles
	Q19, Q20	4.8.C	Calculations with Units and Unit Conversion	- Elapsed time in hours and fractions of hours - Elapsed time in minutes on a clock and number line

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 4)	Recommended Chapter	Recommended Sections
				• Money word problems with coins and dollar bills
Data Analysis	Q21	4.9.A	Data Analysis	• Line plot • Line plot with fractions • Stem and leaf plots • Tables and frequency tables

Table 3: Vertical Alignment Matrix — Connecting Prerequisites to Grade 5 Content

This matrix illustrates the instructional bridge between the Grade 4 prerequisite skills assessed in the diagnostic and the upcoming Grade 5 Target TEKS. It provides the rationale for intervention by showing exactly which Grade 5 chapters and units rely on these prerequisites. Educators should use this table to prioritize interventions that are most critical for the specific Grade 5 content currently being taught.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 4)	Aligned Target TEKS (Grade 5)	Chapters Addressed
Number System and Place Value	Q1, Q2	4.2.B	5.2	• Understanding Decimals
	Q3	4.2.G	5.3	• Operations on Whole Numbers • Operations on Decimals
Fractions and Rational Numbers	Q4	4.3.D	5.3	• Operations on Whole Numbers • Operations on Decimals
	Q5, Q6	4.3.E	5.3	• Operations on Whole Numbers • Operations on Decimals
Operations	Q7, Q8, Q9	4.4.A	5.3	• Operations on Whole Numbers • Operations on Decimals
	Q10, Q11	4.4.H	5.3	• Operations on Whole Numbers • Operations on Decimals
Algebraic Reasoning	Q12	4.5.A	5.4	• Perimeter and Area • Expressions, Equations, and Patterns • Volume • Operations on Whole Numbers
	Q13	4.5.B	5.4	• Perimeter and Area • Expressions, Equations, and Patterns • Volume • Operations on Whole Numbers
Geometry and Measurement	Q14, Q15	4.5.D	5.4	• Perimeter and Area • Expressions, Equations, and Patterns • Volume • Operations on Whole Numbers
	Q16, Q17	4.6.D	5.5	2D Figures
	Q18	4.7.C	5.4	• Perimeter and Area • Expressions, Equations, and Patterns • Volume • Operations on Whole Numbers
	Q19, Q20	4.8.C	5.7	• Converting Units
Data Analysis	Q21	4.9.A	5.9	• Data Analysis