

## Intermediate Math Assessment (for grades 2 and higher) Counting & Symbol Identification

Student Name \_\_\_\_\_

Grade \_\_\_\_\_

Examiner Name \_\_\_\_\_

Date \_\_\_\_\_

**Counting** “Count to 100. Start with 1.” Note: For middle/high school students, you may sample  
**Directions:** 3 sequences (34-45; 68-74; 88-100) rather than count from 1-100.  
 “Count by 10’s. Start with 10 and count as high as you can.” (Stop at 100.)  
 Ask student to skip count other series to the number indicated below.

**Scoring:** Record the highest number counted correctly in the space provided. Stop if the student cannot count at a rate of 2 seconds per number and record highest number counted fluently. Write NR for no response. Add M if you needed to model the task first. Highlight items missed.

Count by 1’s to... _____	Skip count by 10’s to 100 _____
Skip count by 2’s to 20 _____	Skip count by 5’s to 100 _____
Skip count by 9’s to 90 _____	Skip count by 4’s to 40 _____
Skip count by 3’s to 30 _____	

**Number Identification:** Use the “Reading Numbers” student worksheet. Point to each number as ask, “What number?” Stop if the student misses 5 consecutive items. Record + for correct; record student error if incorrect; record NR for no response. Highlight items missed.

64	81	29	47	320	417
521	300	800	708	502	3,248
1,465	6,000	2,000	2,092	7,025	3,004
1,009	65,635	85,306	95,620	82,068	145,326
345,453	150,200	620,308	4,580,681	39,709,003	409,390,605

**Number Writing:** Use the “Writing Numbers” worksheet. Dictate the following numbers. Stop if the student misses 5 consecutive items. Record + for correct; record student error if incorrect; record NR for no response. Highlight items missed.

a. 98	b. 29	c. 81	d. 47
e. 715	f. 436	g. 350	h. 700
i. 200	j. 408	k. 702	l. 5,314
m. 2,643	n. 7,000	o. 9,000	p. 5,072
q. 1,040	r. 5,002	s. 6,008	t. 25,600
u. 13,068	v. 46,000	w. 456,986	x. 533,009
y. 564,093	z. 703,310		

## Operations

<p><b>Operations Directions:</b></p> <p><b>(Addition, Subtraction, Multiplication, and Division)</b></p>	<p>Tell the student that the problems in the top section are addition and the problems on the bottom are subtraction. Ask the student to start at the top and complete as many problems as he/she can. Tell the student to skip problems they don't know how to do. Watch as the student works each problem. If the student misses 3 consecutive problems (excluding fact errors) and you think it is unlikely the student would be able to successfully complete any more problems, have the student stop and move to the next section. If you note the student is making a major procedural error (such as not renaming subtraction problems), wait until the student finishes that problem, then prompt by asking if they forgot they need to rename. Allow the student to self-correct but note later in your scoring that you prompted the strategy. Repeat with the multiplication and division problems. If the student relies on a multiplication table or calculator, ask the student to first do as many problems as he/she can, then allow the student to use the table/calculator. Note problems the student could do with and without the support, Note the strategies used below (fingers, facts, counting up, skip counting touch math, multiplication table, etc.) or write "none" if no strategy was observed.</p>
<p><b>Strategies Used</b></p>	
<p><b>Scoring</b></p>	<p>After the student completes the assessment, score using a contrasting color pen and/or highlighter. Write + or C for correct, circle incorrect problems (or parts of the problem) <u>and</u> write in the correct answer. Determine the type of error (fact, procedural, conceptual, sign, etc.) and write error type next to the problem missed. <u>Do not</u> count reversed numerals as errors.</p>

## Problem Solving

<p><b>Story Problem Directions</b></p>	<p>Make sure the student can read each problem accurately by having he/she read the problem aloud or you can read the problem to the student. Have the student use the space provided to solve the problem so you can analyze the work (or attach student's work). Watch as the student works each problem. The student may use a calculator or multiplication table as the focus of this part if on problem solving. Note strategies used below (number families, number sentence, draws a picture, etc.) or write "none" if none were observed.</p>
<p><b>Strategies Used</b></p>	
<p><b>Scoring Student Copy</b></p>	<p>After the student completes the assessment, score using a contrasting color pen and/or highlighter. Write + or C for correct, circle incorrect problems (or parts of the problem) and write in the correct answer. Determine the type of error (fact, procedural, conceptual, sign, etc.) and write this next to the problem missed.</p>
<p><b>Score Summary</b></p>	<p>Record results: + for correct; type of error for incorrect or NR for no response.</p> <p>#1 Simple action addition: _____ #4 Multi-step addition: _____</p> <p>#2 Classification: _____ #5 Multiplication/division: _____</p> <p>#3 Comparison: _____ #6 Multi-step Multip/div: _____</p>

**Reading numbers**

64	81	29	47	320	417
521	300	800	708	502	3,248
1,465	6,000	2,000	2,092	7,025	3,004
1,009	65,635	85,306	95,620	82,068	145,326
345,453		150,200		620,308	
4, 580,681		39,709,003		409,390,605	

**Writing numbers**

a.	b.	c.	d.
e.	f.	g.	h.
i.	j.	k.	l.
m.	n.	o.	p.
q.	r.	s.	t.
u.	v.	w.	x.
y.	z.		

Intermediate Math Assessment – Operations Screener

Student Name \_\_\_\_\_

Date \_\_\_\_\_

Addition

$$\begin{array}{r} 35 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 463 \\ + 124 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ + 46 \\ \hline \end{array}$$

$$\begin{array}{r} 258 \\ + 313 \\ \hline \end{array}$$

$$\begin{array}{r} 374 \\ + 261 \\ \hline \end{array}$$

$$\begin{array}{r} 437 \\ + 275 \\ \hline \end{array}$$

$$\begin{array}{r} 385 \\ 24 \\ + 120 \\ \hline \end{array}$$

$$\begin{array}{r} 895 \\ 1486 \\ 38 \\ + 276 \\ \hline \end{array}$$

Subtraction

$$\begin{array}{r} 57 \\ - 20 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 393 \\ - 174 \\ \hline \end{array}$$

$$\begin{array}{r} 423 \\ - 171 \\ \hline \end{array}$$

$$\begin{array}{r} 724 \\ - 578 \\ \hline \end{array}$$

$$\begin{array}{r} 902 \\ - 164 \\ \hline \end{array}$$

$$\begin{array}{r} 5231 \\ - 1658 \\ \hline \end{array}$$

$$\begin{array}{r} 5304 \\ - 1211 \\ \hline \end{array}$$

$$\begin{array}{r} 4000 \\ - 1453 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 283 \\ \hline \end{array}$$

Student Name \_\_\_\_\_

Date \_\_\_\_\_

Multiplication

$$2 \times 7 =$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 758 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 302 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 423 \\ \times 29 \\ \hline \end{array}$$

Division

$$3 \overline{)15}$$

$$5 \overline{)38}^r$$

$$16 \div 2 =$$

$$5 \overline{)85}$$

$$2 \overline{)172}$$

$$5 \overline{)82}$$

$$9 \overline{)274}$$

$$5 \overline{)635}$$

$$5 \overline{)8753}$$

$$56 \overline{)857}$$

**Intermediate Math Assessment**  
**Story Problems**

Student Name \_\_\_\_\_

Date \_\_\_\_\_

1. Tyrone had 15 CDs in his collection. He bought 4 more CDs with his birthday money. How many CDs does he have now?
  
2. There are 18 kids on my soccer team. 11 are boys. How many are girls?
  
3. Micah ran a race in 25 seconds. His brother ran the race in 18 seconds. How much slower did Micah run than his brother?
  
4. Darnell's fish tank has 12 goldfish and 3 angelfish. She bought 8 guppies. How many fish does she have now?
  
5. Raina needs to raise money for her band field trip. How much money would she raise if she sold 14 raffle tickets for \$5.00 each?
  
6. TJ is having a party and wants to have enough soft drinks for 25 kids. If each person drinks 2 cans, how many 6 packs will he need to buy?

Answer Key

Addition

$$\begin{array}{r} 35 \\ + 21 \\ \hline 56 \end{array}$$
$$\begin{array}{r} 463 \\ + 124 \\ \hline 587 \end{array}$$
$$\begin{array}{r} 1 \\ 37 \\ + 46 \\ \hline 83 \end{array}$$
$$\begin{array}{r} 1 \\ 258 \\ + 313 \\ \hline 571 \end{array}$$

$$\begin{array}{r} 1 \\ 374 \\ + 261 \\ \hline 635 \end{array}$$
$$\begin{array}{r} 11 \\ 437 \\ + 275 \\ \hline 712 \end{array}$$
$$\begin{array}{r} 1 \\ 385 \\ 24 \\ + 120 \\ \hline 529 \end{array}$$
$$\begin{array}{r} 122 \\ 895 \\ 1486 \\ 38 \\ + 276 \\ \hline 2695 \end{array}$$

Subtraction

$$\begin{array}{r} 57 \\ - 20 \\ \hline 37 \end{array}$$
$$\begin{array}{r} 4 \\ 54 \\ - 18 \\ \hline 36 \end{array}$$
$$\begin{array}{r} 8 \\ 393 \\ - 174 \\ \hline 219 \end{array}$$
$$\begin{array}{r} 3 \\ 423 \\ - 171 \\ \hline 252 \end{array}$$
$$\begin{array}{r} 611 \\ 724 \\ - 578 \\ \hline 146 \end{array}$$
$$\begin{array}{r} 89 \\ 902 \\ - 164 \\ \hline 738 \end{array}$$
$$\begin{array}{r} 41112 \\ 5231 \\ - 1658 \\ \hline 3573 \end{array}$$
$$\begin{array}{r} 2 \\ 5304 \\ - 1211 \\ \hline 4093 \end{array}$$
$$\begin{array}{r} 399 \\ 4000 \\ - 1453 \\ \hline 2547 \end{array}$$
$$\begin{array}{r} 99 \\ 1000 \\ - 283 \\ \hline 717 \end{array}$$

Answer Key

Multiplication

$2 \times 7 = 14$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 43 \\ \times 2 \\ \hline 86 \end{array}$$

$$\begin{array}{r} 35 \\ \times 5 \\ \hline 175 \end{array}$$

$$\begin{array}{r} 758 \\ \times 2 \\ \hline 1516 \end{array}$$

$$\begin{array}{r} 302 \\ \times 5 \\ \hline 1510 \end{array}$$

$$\begin{array}{r} 26 \\ \times 52 \\ \hline 52 \\ \hline 130 \\ \hline 1352 \end{array}$$

$$\begin{array}{r} 423 \\ \times 29 \\ \hline 3807 \\ \hline 846 \\ \hline 12267 \end{array}$$

Division

$$\begin{array}{r} 5 \\ 3 \overline{) 15} \end{array}$$

$$\begin{array}{r} 7 \text{ r } 3^* \\ 5 \overline{) 38} \end{array}$$

$16 \div 2 = 8$

$$\begin{array}{r} 17 \\ 5 \overline{) 85} \end{array}$$

$$\begin{array}{r} 86 \\ 2 \overline{) 172} \end{array}$$

$$\begin{array}{r} 16 \text{ r } 2 \\ 5 \overline{) 82} \end{array}$$

$$\begin{array}{r} 30 \text{ r } 4 \\ 9 \overline{) 274} \end{array}$$

$$\begin{array}{r} 127 \\ 5 \overline{) 635} \end{array}$$

$$\begin{array}{r} 1750 \text{ r } 3 \\ 5 \overline{) 8753} \end{array}$$

$$\begin{array}{r} 15 \text{ r } 17 \\ 56 \overline{) 857} \end{array}$$

\*Note: remainders may be expressed as decimals or fractions

**Intermediate Math Assessment**

**Story Problem Answer Key (some possible solution strategies)**

1. Tyrone had 15 CDs in his collection. He bought 4 more CDs with his birthday money. How many CDs does he have now? (**Change or simple action problem**)

$$\begin{array}{r} 15 \quad 4 \\ \longrightarrow \text{CDs} \end{array} \qquad \begin{array}{r} 15 \\ + 4 \\ \hline 19 \text{ CDs} \end{array}$$

2. There are 18 kids on my soccer team. 11 are boys. How many are girls? (**Classification problem**)

$$\begin{array}{r} 11 \quad G \\ \longrightarrow 18 \end{array} \qquad \begin{array}{r} 18 \\ - 11 \\ \hline 7 \text{ girls} \end{array}$$

3. Micah ran a race in 25 seconds. His brother ran the race in 18 seconds. How much faster did Micah run than his brother? (**Comparison problem**)

$$\begin{array}{r} ? \quad 18 \\ \longrightarrow 25 \end{array} \qquad \begin{array}{r} 25 \\ - 18 \\ \hline 7 \text{ sec.} \end{array}$$

4. Darnell's fish tank has 12 goldfish and 3 angelfish. She bought 8 guppies. How many fish does she have now? (**Multi-step addition problem**)

$$\begin{array}{r} 12 \quad 3 \quad 8 \\ \longrightarrow F \end{array} \qquad \begin{array}{r} 12 \\ 8 \\ + 3 \\ \hline 23 \text{ fish} \end{array}$$

5. Raina needs to raise money for her band field trip. How much money would she raise if she sold 14 raffle tickets for \$5.00 each? (**Multiplication/division problem**)

$$\frac{\$5.00}{\text{ticket}} = \frac{\$}{14} \qquad 14 \times \$5.00 = \$70.00$$

6. TJ is having a party and wants to have enough soft drinks for 25 kids. If each person drinks 2 cans, how many 6 packs will he need to buy?

(**Multi-step multiplication/division problem**)

$$\begin{array}{r} 2 \text{ cans} = ? \text{ cans} \\ \text{person} \quad 25 \end{array} \qquad \begin{array}{r} 25 \\ \times 2 \\ \hline 50 \text{ cans} \end{array} \qquad \begin{array}{r} 6 \text{ cans} = \underline{\quad 50 \quad} \\ \text{pack} \quad ? \text{ packs} \end{array} \qquad \begin{array}{l} 50 \div 6 = 8 \text{ r}2 \\ \text{round up to 9} \\ \text{six packs} \end{array}$$