



# TEN-KEY NUMERIC KEYPAD: RESEARCH & ROUTINES

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## Ten-Key Numeric Keypad Research

The best source for determining final recommendation for a minimum level numeric data entry speed in a ten-key course would be to query some temp agencies and local businesses in your school’s area and determine what standards are reasonable and acceptable. GDP measures speed in DPM (digits per minute) rather than KPH (keystrokes per hour)—two columns below are included for reference. A bottom-line minimum exit DPM speed (C- grade) of 130 DPM is reasonable and in line with general research. Consider averaging selected Ten-Key Numeric Keypad Timed Practice drills to [assess student exit skills](#).

NUMERIC DATA ENTRY SPEEDS		
Entry Level		
DPM*	KPH**	Source
150 to 200	9,000 to 12,000	<b>E-How.com</b> “Numeric data entry speeds that qualify clerical workers for employment typically must be between 9,000 and 12,000 KPH. Acceptable alphanumeric data entry speed requirements are a little bit lower than purely numerical speeds, because the addition of the alpha characters slows down most operators. These can be as low as 7,000 KPH to qualify for employment.” Read more: <a href="http://www.ehow.com/about_5081610_data-entry-speed.html#ixzz23oMp4SiI">What Is Data Entry Speed?   eHow.com</a> <a href="http://www.ehow.com/about_5081610_data-entry-speed.html#ixzz23oMp4SiI">http://www.ehow.com/about_5081610_data-entry-speed.html#ixzz23oMp4SiI</a>
*(Digits per Minute); **(Keystrokes per Hour)		

The average student can expect to spend approximately 100 minutes (2 minutes per exercise) completing the 50 ten-key numeric routines one time each and can expect to achieve about

110 DPM. Of course, if those students repeat all the ten-key routines and therefore complete an additional two hours of practice, their DPM speed should continue to rise significantly. Approximate completion times for an average student are noted next to each ten-key routine and in the section "[Ten-Key Numeric Keypad Checklist](#)."

## Ten-Key Numeric Keypad Lessons

Supplementary lessons for the ten-key numeric keypad follow Lesson 20. These lessons introduce touch typing of both the number keys (Supplementary Lesson, pages 70-71) and arithmetic operators +, -, /, and \* (Enrichment, page 72). Content for these two lessons can be found in both the textbook and on GDP screens:

- Ten-Key Numeric Keypad Lesson (GDP); Supplementary Lesson, Ten-key Numeric Keypad, pages 70-71 (textbook).
- Ten-Key Numeric Keypad Enrichment (GDP); Enrichment Supplementary Lesson, page 72.

Additional Timed Practice and Pretest>>Practice>>Posttest reinforcement drills are found in GDP immediately after the Supplementary and Enrichment Lesson. These drills can also be accessed via the **Skillbuilding** button, **Drills** tab, **Ten-Key Numeric Keypad Timed Practice** and **Numeric Keypad Pretest>>Practice>>Posttest**.

- Ten-Key Numeric Keypad Timed Practice
- Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 3-Digit Numbers
- Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 4-Digit Numbers
- Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: Short Decimal Numbers
- Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 1-4 Digit Numbers
- Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: Long Decimal Numbers

### *Supplementary: Ten-Key Numeric Keypad Lesson*

To access these supplementary lessons in GDP, click the **Lessons** button; from the **Part 1** tab, expand **Unit 4**; under **Lesson 20**, click **Ten-Key Numeric Keypad Lesson**; complete **Ten-Key SL-A** through **Ten-Key SL-F**. Content appears both on the GDP screens and in the textbook on pages 70-71.

Ten-Key Numeric Keypad Lesson	
Ten-Key SL-A: The 4, 5, and 6 Keys	
Ten-Key SL-B: The 7, 8, and 9 Keys	
Ten-Key SL-C: The 1, 2, and 3 Keys	
Ten-Key SL-D: The 0 Key	
Ten-Key SL-E: The . Key	
Ten-Key SL-F: New-Key Review	

### *Supplementary: Ten-Key Numeric Keypad Enrichment*

To access these supplementary lessons in GDP, click the **Lessons** button; from the **Part 1** tab, expand **Unit 4**; click **Ten-Key Numeric Keypad Enrichment**; complete **Ten-Key SL-A** through **Ten-Key SL-F**.

Ten-Key Numeric Keypad Enrichment	
Ten-Key Enrichment SL-A: The + Key	
Ten-Key Enrichment SL-B: The / Key	
Ten-Key Enrichment SL-C: The - Key	
Ten-Key Enrichment SL-D: The * Key	
Ten-Key Enrichment SL-E: Numeric Keypad Review	

Content appears both on the GDP screens and in the textbook on page 72.

## Ten-Key Numeric Keypad Timed Practice

After students finish typing both lessons, they should complete the Timed Practice. The purpose of the Timed Practice is to measure progress in each of the practice key categories. Ideally, students will increase DPM (digits per minute) and decrease errors.

To access the timed practice drills in GDP, click the **Lessons** button; from the **Part 1** tab, expand **Unit 4**; click **Ten-Key Numeric Keypad Timed Practice**; complete **Ten-Key Timed Practice 1** through **Ten-Key Timed Practice 14**. Content appears only in GDP screens.

### Assessment:

The degree of difficulty rises as the number of digits increases. Consider averaging selected Ten-Key Numeric Keypad Timed Practice drills to assess student exit skills; for example, perhaps select Timed Practice 4, which covers keys 0-9 and the decimal. Perhaps select Timed Practice 9, which includes 2- to 4-digit numbers. Finally, perhaps select Timed Practice 13 or 14 for a combination of short and long decimal numbers representing the highest degree of difficulty.

Ten-Key Numeric Keypad Timed Practice
Ten-Key Timed Practice 1: Practice keys 4-9
Ten-Key Timed Practice 2: Practice keys 1-9
Ten-Key Timed Practice 3: Practice keys 0-9
Ten-Key Timed Practice 4: Practice keys 0-9 . (decimal)
Ten-Key Timed Practice 5: 3-Digit Numbers
Ten-Key Timed Practice 6: 3-Digit Numbers
Ten-Key Timed Practice 7: 4-Digit Numbers
Ten-Key Timed Practice 8: 4-Digit Numbers
Ten-Key Timed Practice 9: 2- to 4-Digit Numbers
Ten-Key Timed Practice 10: Short Decimal Numbers
Ten-Key Timed Practice 11: Long Decimal Numbers
Ten-Key Timed Practice 12: Long Decimal Numbers
Ten-Key Timed Practice 13: Short and Long Decimal Numbers
Ten-Key Timed Practice 14: Short and Long Decimal Numbers

## Numeric Keypad Pretest>>Practice>>Posttest

After students finish typing Timed Practice drills, they should complete Pretest>>Practice>>Posttest drills for additional practice. These routines measure progress in each practice key category. Ideally, students will increase DPM and lower errors as they work through each routine.

To establish a beginning speed, students should type the Pretest, pushing moderately for speed. Practice drills are designed to reinforce reaches for a specific number pattern. In the Posttest, their goal is to improve the Pretest score by increasing the DPM and decreasing errors when compared to the Pretest.

- 3-Digit Numbers
- 4-Digit Numbers
- Short Decimal Numbers

- 1-4 Digit Numbers
- Long Decimal Numbers

### Numeric Keypad Pretest>>Practice>>Posttest Routines

To access these drills in GDP, click the **Lessons** button; from the **Part 1** tab, expand **Unit 4**; click **Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 3-Digit Numbers**; complete the Pretest; Practice 1, 2, 3; and Posttest. Content appears only in GDP screens.

Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 3-Digit Numbers
Ten-Key P/P/P 3-Digit Numbers: Pretest
Ten-Key P/P/P 3-Digit Numbers: Practice 1
Ten-Key P/P/P 3-Digit Numbers: Practice 2
Ten-Key P/P/P 3-Digit Numbers: Practice 3
Ten-Key P/P/P 3-Digit Numbers: Posttest

Repeat the same process for all the P/P/P routines. Approximate completion times are as follows:

- 3-Digit Numbers [10']
- 4-Digit Numbers [11']
- Short Decimal Numbers [10']
- 1-4 Digit Numbers [10']
- Long Decimal Numbers [12']

### Numeric Keypad Timed Practice Reporting

Results of Timed Practice reported in DPM (digits per minute), time spent, and errors may be viewed in the left pane immediately after completing a Timed Practice as well as in the Portfolio:

The screenshot shows the 'Lesson Ten-Key Timed Practice 2: Practice keys 1-9' interface. The top navigation bar includes 'Lessons', 'Skillbuilding', 'MAP+', 'Timed Writings', 'Language Arts', and 'Reference Manual'. The left sidebar contains instructions and performance data for 'Attempt #1'.

**Attempt #1**  
125 DPM/1:35/5e  
DPM (digits per minute)

**INSTRUCTIONS**

1. Ensure that NUM LOCK is activated.
2. Press ENTER after typing the final digit of each number.
3. Type the first column from top to bottom; then move to the next column.
4. Keep your eyes on the copy
5. When you press Enter after the last number, the practice will be scored.

**Lesson Ten-Key Timed Practice 2: Practice keys 1-9**  
You have completed this exercise. Click **Next** to continue.

476	167	754	531	746	334	568	829	957	146
372	426	193	942	853	712	149	637	486	329
551	789	592	726	962	365	438	218	582	381
983	238	812	861	147	819	129	341	673	247
421	945	638	397	285	654	247	759	149	655

476	167	754	531	746	334	567	829	957	146
372	426	193	942	853	712	149	637	486	329
551	789	592	726	962	665	438	218	582	381
983	238	812	861	147	819	126	641	673	247
421	945	638	397	285	654	247	489	149	655

Grade: N/A	Lesson	ten-key t		
Date	Lesson	Title	Total Time	
08/01/2012 9:49 AM		Ten-Key Timed Practice 2: Practice keys 1-9	01:35	
Attempt	DPM	Errors	Time Spent	Last Modified
Attempt #1	125	5	01:35	08/01/2012 9:49 AM

## Numeric Keypad Pretest>>Practice>>Posttest Reporting

Results of Pretest>>Practice>>Posttest are reported in DPM (digits per minute), errors are scored, and time spent is calculated. Results may be viewed in the left pane of the practice screen immediately after completing a Pretest or Posttest as well as in the Portfolio:

Date	Lesson	Title	Total Time	
08/02/2012 7:13 AM		Ten-Key P/P/P Short Decimal Numbers: Posttest	02:49	
Attempt	DPM	Errors	Time Spent	Last Modified
Attempt #1	75	2	02:49	08/02/2012 7:13 AM
<b>Average</b>	75	2		
08/02/2012 7:05 AM		Ten-Key P/P/P Short Decimal Numbers: Practice 3	02:50	
08/02/2012 7:01 AM		Ten-Key P/P/P Short Decimal Numbers: Practice 2	02:43	
08/01/2012 9:37 PM		Ten-Key P/P/P Short Decimal Numbers: Practice 1	03:28	
08/01/2012 9:33 PM		Ten-Key P/P/P Short Decimal Numbers: Pretest	03:39	
Attempt	DPM	Errors	Time Spent	Last Modified
Attempt #1	60	5	03:39	08/01/2012 9:33 PM

**Your goal is to improve your results from the Pretest to the Posttest. Note the increase in DPM (60 to 75) and the decrease in errors (5 to 2).**

## Portfolio & Excel Filters for Ten-Key Results

Follow these steps to filter the Portfolio to display only Ten-Key Numeric Keypad routines:

1. From the **GPS Reports** tab, select the desired **Class**, **Section**, and **Student** to display the Portfolio results.
2. Click the **Show All** button. (If no filter is in use, this step can be skipped.)
3. In the **Title** filter box, type **ten**; note that in the Title column, only titles that include “ten” display.

**To further filter the Portfolio to include a particular group of Ten-Key Numeric Keypad routines:**

In the **Title** box, type **ten-key** followed by characters from any of these routines:

- **sl** (for **Ten-Key Numeric Keypad Lessons SL-A through SL-F**); for example:

Course Grade: N/A	Lesson	ten-key sl
<input type="checkbox"/>	Date	Lesson
		Title

- **e** (for **Ten-Key Enrichment SL-A through SL-E**)
- **t** (for **Ten-Key Timed Practice 1 through 14**)



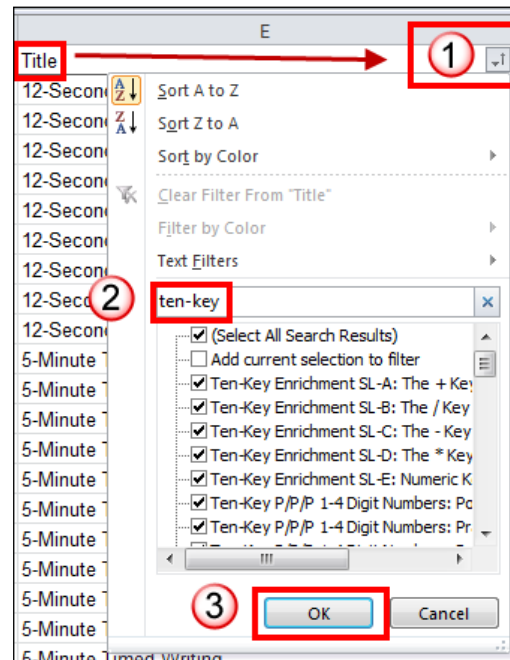
**Note:** These Ten-Key Timed Practice 1 through 14 routines are recommended for use when assessing exit DPM skills.

In the **Title** box, delete **ten-key** and type these exact characters to display any of these routines:

- **3-digit numbers:** (for Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 3-Digit Numbers)
- **4-digit numbers:** (for Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 4-Digit Numbers)
- **short d:** (for Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: Short Decimal Numbers)
- **1-4** (for Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: 1- to 4-Digit Numbers Numbers)
- **p l** (for Ten-Key Numeric Keypad Pretest>>Practice>>Posttest: Long Decimal Numbers)

### To filter the exported Excel spreadsheet to include only Ten-Key Numeric Keypad Drills:

1. In the **Portfolio**, click **Export, Excel**, and open the Excel file for editing.
2. Under the **Title** column, click the list arrow;
3. In the **Search** box, type **ten-key**; click **OK**; the spreadsheet should now display only ten-key routines.



### To SUM the Time Spent column in Excel for Ten-Key Numeric Keypad Drills:

1. With the exported Student Portfolio Excel file open, select the **Time Spent** column (click the column letter at the top of the column to select the column in one click).
2. From the **Data** tab, **Data Tools** group, click **Text To Columns**.
3. From the **Convert Text to Columns Wizard – Step 1 of 3** dialog box, select **Delimited**; click **Next**.

4. In the **Step 2 of 3** dialog box, under **Delimiters**, check **Tab**; click **Finish**.
5. With the column still selected, right-click; click **Format Cells**; from the **Number** tab under **Category**, click **Custom**; under **Type**, scroll down almost to the end and click **[h]:mm:ss**; click **OK**.
6. Click in the cell at the bottom of the last entry in the **Time Spent** column.
7. From the **Home** tab, **Editing** group, click the **AutoSum** button.
8. Note that the column to be summed is surrounded by wavy lines and a formula displays; for example,  $=SUBTOTAL(9,N2:N341)$ ; if necessary, drag the borders to include the entire range of cells to be summed.
9. Press **Enter** to accept the formula, and note the display of the SUM of that column; for example, *1:37:10*, meaning *1 hour, 37 minutes, and 10 seconds*.

## Gradebook—Configure Exercises Filters for Ten-Key Results

If you are using a Gradebook in your course and are in **GPS, Gradebook** tab, **Exercises, Configure Exercises**, you need to filter to ten-key numeric keypad drills only. Set the **Exercise Filter** to **Category**; the first subfilter to **Skillbuilding**; and the last four subfilters shown below one by one to achieve that result. See [Setting Up an Interim Gradebook \[PDF\]](#) for details.



**Note:** You must enlarge the **Configure Exercises** window by dragging on the right border of the window to display the scroll bars so you can drag them down to view some of these items.

- **Alpha/Number/Symbol Practice** (displays Ten-Key Numeric Keypad Lesson, New-Key Review only)
- **New Key Drill** (displays Ten-Key Numeric Keypad Lesson, except for New-Key Review)
- **Pretest/Practice/Posttest** (displays Numeric Keypad Pretest>>Practice>>Posttest)
- **Ten-Key Numeric Keypad** (displays Ten-Key Numeric Keypad Timed Practice)

## Ten-Key Numeric Keypad Checklist

Consider using this at-a-glance checklist of ten-key routines and corresponding drills. Menu group names, lesson names and exercise titles match those found on GDP menus. Completion times are approximations only. A beginning student should spend approximately 100 minutes completing all 50 ten-key numeric routines one time each.

Ten-Key Numeric Keypad Lesson (12')		Title Box Filter
	Ten-Key SL-A: The 4, 5, and 6 Keys	<b>ten-key sl</b>
	Ten-Key SL-B: The 7, 8, and 9 Keys	
	Ten-Key SL-C: The 1, 2, and 3 Keys	
	Ten-Key SL-D: The 0 Key	
	Ten-Key SL-E: The . Key	
	Ten-Key SL-F: New-Key Review	

<b>Ten-Key Numeric Keypad Enrichment (10')</b>		<b>Title Box Filter</b>
Ten-Key Enrichment SL-A: The + Key		<b>ten-key e</b>
Ten-Key Enrichment SL-B: The / Key		
Ten-Key Enrichment SL-C: The - Key		
Ten-Key Enrichment SL-D: The * Key		
Ten-Key Enrichment SL-E: Numeric Keypad Review		

<b>Ten-Key Numeric Keypad Timed Practice* (25')</b>		<b>Title Box Filter</b>
Ten-Key Timed Practice 1: Practice keys 4-9		<b>ten-key t</b>
Ten-Key Timed Practice 2: Practice keys 1-9		
Ten-Key Timed Practice 3: Practice keys 0-9		
Ten-Key Timed Practice 4: Practice keys 0-9 . (decimal)		
Ten-Key Timed Practice 5: 3-Digit Numbers		
Ten-Key Timed Practice 6: 3-Digit Numbers		
Ten-Key Timed Practice 7: 4-Digit Numbers		
Ten-Key Timed Practice 8: 4-Digit Numbers		
Ten-Key Timed Practice 9: 2- to 4-Digit Numbers		
Ten-Key Timed Practice 10: Short Decimal Numbers		
Ten-Key Timed Practice 11: Long Decimal Numbers		
Ten-Key Timed Practice 12: Long Decimal Numbers		
Ten-Key Timed Practice 13: Short and Long Decimal Numbers		
Ten-Key Timed Practice 14: Short and Long Decimal Numbers		
*Note: Gradebook allows you to set DPM (shown in Gradebook as WPM), Error, and WPM penalty when you select Custom Grading Method; WPM defaults to 0—you must enter values.		

<b>Ten-Key Numeric Keypad Pretest&gt;&gt;Practice&gt;&gt;Posttest: 3-Digit Numbers (10')</b>		<b>Title Box Filter</b>
Ten-Key P/P/P 3-Digit Numbers: Pretest		<b>3-digit numbers:</b>
Ten-Key P/P/P 3-Digit Numbers: Practice 1		
Ten-Key P/P/P 3-Digit Numbers: Practice 2		
Ten-Key P/P/P 3-Digit Numbers: Practice 3		
Ten-Key P/P/P 3-Digit Numbers: Posttest		

<b>Ten-Key Numeric Keypad Pretest&gt;&gt;Practice&gt;&gt;Posttest: 4-Digit Numbers (11')</b>		<b>Title Box Filter</b>
Ten-Key P/P/P 4-Digit Numbers: Pretest		<b>4-digit numbers:</b>
Ten-Key P/P/P 4-Digit Numbers: Practice 1		
Ten-Key P/P/P 4-Digit Numbers: Practice 2		
Ten-Key P/P/P 4-Digit Numbers: Practice 3		
Ten-Key P/P/P 4-Digit Numbers: Posttest		

<b>Ten-Key Numeric Keypad Pretest&gt;&gt;Practice&gt;&gt;Posttest: Short Decimal Numbers (10')</b>		<b>Title Box Filter</b>
Ten-Key P/P/P Short Decimal Numbers: Pretest		<b>short d:</b>
Ten-Key P/P/P Short Decimal Numbers: Practice 1		
Ten-Key P/P/P Short Decimal Numbers: Practice 2		
Ten-Key P/P/P Short Decimal Numbers: Practice 3		
Ten-Key P/P/P Short Decimal Numbers: Posttest		



<b>Ten-Key Numeric Keypad Pretest&gt;&gt;Practice&gt;&gt;Posttest: 1- to 4-Digit Numbers (10')</b>		<b>Title Box Filter</b>
Ten-Key P/P/P 1- to 4-Digit Numbers: Pretest		<b>1-4</b>
Ten-Key P/P/P 1- to 4-Digit Numbers: Practice 1		
Ten-Key P/P/P 1- to 4-Digit Numbers: Practice 2		
Ten-Key P/P/P 1- to 4-Digit Numbers: Practice 3		
Ten-Key P/P/P 1- to 4-Digit Numbers: Posttest		

<b>Ten-Key Numeric Keypad Pretest&gt;&gt;Practice&gt;&gt;Posttest: Long Decimal Numbers (12')</b>		<b>Title Box Filter</b>
Ten-Key P/P/P Long Decimal Numbers: Pretest		<b>p l</b>
Ten-Key P/P/P Long Decimal Numbers: Practice 1		
Ten-Key P/P/P Long Decimal Numbers: Practice 2		
Ten-Key P/P/P Long Decimal Numbers: Practice 3		
Ten-Key P/P/P Long Decimal Numbers: Posttest		