MATHEMATICS NAVIGATOR
ELEMENTARY
Screener Test 1
ADMINISTRATION INSTRUCTIONS

Beginning Place Value, Knowing Addition and Subtraction Facts, Knowing Multiplication and Division Facts, Understanding Addition and Subtraction, Understanding Multiplication, Understanding Division

Please read these instructions before administering the Elementary Navigator Screener Test 1.

Time

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Mathematics tasks (Part 1)</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Mathematics tasks (Part 2)</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Total</td>
<td>40 minutes</td>
</tr>
</tbody>
</table>

Note: A testing time of 40 minutes is indicated. 40 minutes is meant to be long enough to allow most students to finish answering the questions and have some time to check their answers.

Preparation

Before the test begins please cover or remove any teaching material, posters, or displays that students might refer to. Make sure that students do not use calculators.

All the questions in Part 1 are fill-in-the-blanks. Part 1 is a timed test. All the questions in Part 2 are multiple-choice. Students will record their answers for Part 2 on a separate Answer Sheet (page 11).

Requirements

The teacher needs:
- this set of Administration Instructions
- the Elementary Navigator Screener Test 1
- extra Answer Sheets
- extra soft pencils (preferably 2B) and erasers
- a watch or clock
- book or other quiet activities for early finishers

Each student needs:
- the Elementary Navigator Screener Test 1
- an Answer Sheet
- a soft pencil, preferably 2B
- an eraser
- paper to use when computing answers
Elementary Screener Test 1 Administration Instructions

Assistance
If students are uncertain about how to record their answers, the teacher may explain this at any time during the test.

Do not give the answer to a test question, the meaning of a word or hints about how to approach the question.

Administration
Give one copy of the Elementary Navigator Screener Test 1 and one Answer Sheet to each student.

Introduction to the Mathematics Test

• “I will give you each a test and an Answer Sheet. Please do not open the test until I tell you. Begin by filling in the information on the front cover of the test and the Answer Sheet.”

Distribute the tests and Answer Sheets. Please help the students to complete the information on the front cover of the test and the Answer Sheet if necessary. Check that students have supplied all the information correctly.

• “You are about to take a Mathematics test. This test has two parts, Part 1 and Part 2. You will begin with Part 1 and fill in the blanks as quickly as possible. You will have 10 minutes to finish this page. If you don’t know an answer skip it and go on the next problem. If you have time, return to it at the end. I will stop you after 10 minutes and tell you to move on to Part 2, whether or not you are finished with Part 1.”

• “Part 2 consists of 24 questions. Answer each question by choosing the appropriate letter A, B, C, or D after each question. Choose only one letter for each question in Part 2.”

• “On the Answer Sheet for Part 2, use your pencil to shade in the square corresponding to your chosen letter for that question. If you want to change your answer for a question, erase the square carefully, and shade in the square corresponding to your new answer.”

• “You have 25 minutes to complete Part 2. Try to answer every question but don’t spend too long on one that is too hard.”

• “Are there any questions?”

Check that everyone understands what is required.

• “You may open your tests to page 3 and start now.”
Ending the Session

Part 1
After 10 minutes, say:

• “Your ten minutes is up. Please turn to Part 2 on page 5 of your test.”

Part 2
• “Begin answering the questions in Part 2. Use your Answer Sheet to fill in A, B, C, or D for each question in Part 2.”

After 15 minutes, say:

• “You have ten minutes to finish answering the questions.”

After five more minutes, say:

• “Now you have five minutes to finish answering the questions. Don’t forget to check your answers.”

Allow a further five minutes. Students may use this time to check their answers, but they may choose to continue answering the questions.

At the end of this time, if more than two or three of the students have not finished, you may allow five minutes extra.

• “Put down your pencils and close your tests.”

Collect all the tests and Answer Sheets.
### Unit: Knowing Addition and Subtraction Facts

| 11 – 8 = 3 | 10 – 7 = 3 | 11 – 9 = 2 | 6 + 3 = 9 | 7 + 8 = 15 |
| 10 – 4 = 6 | 11 – 7 = 4 | 14 – 7 = 7 | 7 + 3 = 10 | 6 + 8 = 14 |
| 13 – 4 = 9 | 12 – 7 = 5 | 15 – 6 = 9 | 4 + 7 = 11 | 5 + 6 = 11 |
| 14 – 9 = 5 | 13 – 8 = 5 | 18 – 9 = 9 | 7 + 9 = 16 | 9 + 5 = 14 |
| 15 – 9 = 6 | 15 – 8 = 7 | 11 – 5 = 6 | 8 + 4 = 12 | 8 + 8 = 16 |
| 16 – 7 = 9 | 13 – 7 = 6 | 11 – 4 = 7 | 6 + 7 = 13 | 3 + 5 = 8  |
| 17 – 9 = 8 | 11 – 6 = 5 | 12 – 5 = 7 | 9 + 8 = 17 | 6 + 4 = 10 |
| 12 – 8 = 4 | 12 – 6 = 6 | 12 – 9 = 3 | 5 + 8 = 13 | 5 + 7 = 12 |
| 13 – 5 = 8 | 16 – 8 = 8 | 14 – 8 = 6 | 6 + 9 = 15 | 2 + 8 = 10 |
| 17 – 8 = 9 | 14 – 6 = 8 | 13 – 6 = 7 | 9 + 3 = 12 | 8 + 3 = 11 |

### Unit: Knowing Multiplication and Division Facts

| 3 × 3 = 9 | 8 × 3 = 24 | 6 × 7 = 42 | 48 ÷ 8 = 6 | 72 ÷ 9 = 8 |
| 7 × 7 = 49 | 4 × 3 = 12 | 7 × 8 = 56 | 28 ÷ 4 = 7 | 40 ÷ 8 = 5 |
| 7 × 9 = 63 | 6 × 9 = 54 | 4 × 4 = 16 | 63 ÷ 9 = 7 | 24 ÷ 3 = 8 |
| 4 × 6 = 24 | 8 × 8 = 64 | 8 × 5 = 40 | 24 ÷ 8 = 3 | 45 ÷ 5 = 9 |
| 9 × 8 = 72 | 7 × 5 = 35 | 3 × 6 = 18 | 64 ÷ 8 = 8 | 27 ÷ 3 = 9 |
| 7 × 6 = 42 | 6 × 4 = 24 | 36 ÷ 4 = 9 | 28 ÷ 7 = 4 | 54 ÷ 6 = 9 |
| 7 × 4 = 28 | 8 × 7 = 56 | 42 ÷ 7 = 6 | 35 ÷ 5 = 7 | 63 ÷ 7 = 9 |
| 9 × 3 = 27 | 3 × 7 = 21 | 32 ÷ 4 = 8 | 56 ÷ 8 = 7 | 24 ÷ 6 = 4 |
| 4 × 8 = 32 | 9 × 4 = 36 | 36 ÷ 6 = 6 | 49 ÷ 7 = 7 | 42 ÷ 6 = 7 |
| 6 × 6 = 36 | 6 × 8 = 48 | 56 ÷ 7 = 8 | 48 ÷ 6 = 8 | 81 ÷ 9 = 9 |
### Screener Test Answer Key (Part 2)

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Answer Key</th>
<th>Content</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>Represents two-digit numbers accurately with diagram</td>
<td>Beginning Place Value</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Represents two- and three-digit numbers using expanded form</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>Reads three-digit numbers correctly given numeral</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>Counts on accurately by tens</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>C</td>
<td>Represents three-digit numbers using expanded form</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>D</td>
<td>Writes three-digit numbers correctly given representation</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>B</td>
<td>Uses subtraction to solve word problem</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>C</td>
<td>Identifies correct addition process using number line</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>A</td>
<td>Finds difference in subtraction word problem</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>A</td>
<td>Recognizes expanded form of addition</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>C</td>
<td>Adds small amounts of money</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>D</td>
<td>Selects correct subtraction process to find missing number in addition</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>C</td>
<td>Recognizes word problems appropriately as multiplication; Solves multiplication problems (ratio or rate); Multiplies one-digit number by two-digit number accurately</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>B</td>
<td>Uses visual representations: arrays</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>C</td>
<td>Uses visual representations: tables</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>D</td>
<td>Recognizes word problems appropriately as multiplication; Solves multiplication problems (ratio and rate)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>B</td>
<td>Uses distributive property of multiplication</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>D</td>
<td>Recognizes word problems appropriately as multiplication; Multiplies one-digit number by two-digit number accurately; Solves multiplication problems (groups of)</td>
<td></td>
</tr>
<tr>
<td>Question Number</td>
<td>Answer Key</td>
<td>Content</td>
<td>Unit</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
<td>----------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>19</td>
<td>B</td>
<td>Uses division to solve problem involving zeros in quotient</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>B</td>
<td>Uses division facts to solve problem</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>A</td>
<td>Identifies remainder in simple division problem</td>
<td>Understanding Division</td>
</tr>
<tr>
<td>22</td>
<td>A</td>
<td>Identifies correct number of equal groups</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>B</td>
<td>Solves division word problem involving remainder</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>B</td>
<td>Divides three-digit number by one digit number.</td>
<td></td>
</tr>
</tbody>
</table>
Class Information

School ____________________________________________________________

City ____________________________________________________________ State ________________

Teacher (Mathematics Class) ____________________________________________

Student Information

Grade ______

First name _________________________________________________________

Last name _________________________________________________________

Date of birth _____ (month) _____ (day) _____ (year)

Male ☐ Female ☐

How many years have you been at this school? ______ years

Do you usually speak English at home? Yes ☐ No ☐

Does anyone in your home usually speak a language other than English?

Yes ☐ No ☐
### Elementary Screener Test 1

#### Part 1

1. \(11 - 8 = \) ___
2. \(10 - 7 = \) ___
3. \(11 - 9 = \) ___
4. \(6 + 3 = \) ___
5. \(7 + 8 = \) ___
6. \(10 - 4 = \) ___
7. \(11 - 7 = \) ___
8. \(14 - 7 = \) ___
9. \(7 + 3 = \) ___
10. \(6 + 8 = \) ___
11. \(13 - 4 = \) ___
12. \(12 - 7 = \) ___
13. \(15 - 6 = \) ___
14. \(4 + 7 = \) ___
15. \(5 + 6 = \) ___
16. \(14 - 9 = \) ___
17. \(13 - 8 = \) ___
18. \(18 - 9 = \) ___
19. \(7 + 9 = \) ___
20. \(9 + 5 = \) ___
21. \(13 - 4 = \) ___
22. \(12 - 7 = \) ___
23. \(15 - 6 = \) ___
24. \(4 + 7 = \) ___
25. \(5 + 6 = \) ___
26. \(14 - 9 = \) ___
27. \(13 - 8 = \) ___
28. \(18 - 9 = \) ___
29. \(7 + 9 = \) ___
30. \(9 + 5 = \) ___
31. \(15 - 9 = \) ___
32. \(15 - 8 = \) ___
33. \(11 - 5 = \) ___
34. \(8 + 4 = \) ___
35. \(8 + 8 = \) ___
36. \(13 - 5 = \) ___
37. \(16 - 8 = \) ___
38. \(14 - 8 = \) ___
39. \(6 + 9 = \) ___
40. \(2 + 8 = \) ___
41. \(17 - 8 = \) ___
42. \(14 - 6 = \) ___
43. \(13 - 6 = \) ___
44. \(9 + 3 = \) ___
45. \(8 + 3 = \) ___

#### Multiplication

46. \(3 \times 3 = \) ___
47. \(8 \times 3 = \) ___
48. \(6 \times 7 = \) ___
49. \(48 \div 8 = \) ___
50. \(72 \div 9 = \) ___
51. \(7 \times 7 = \) ___
52. \(4 \times 3 = \) ___
53. \(7 \times 8 = \) ___
54. \(28 \div 4 = \) ___
55. \(40 \div 8 = \) ___
56. \(7 \times 9 = \) ___
57. \(6 \times 9 = \) ___
58. \(4 \times 4 = \) ___
59. \(63 \div 9 = \) ___
60. \(24 \div 3 = \) ___
61. \(4 \times 6 = \) ___
62. \(8 \times 8 = \) ___
63. \(8 \times 5 = \) ___
64. \(24 \div 8 = \) ___
65. \(45 \div 5 = \) ___
66. \(9 \times 8 = \) ___
67. \(7 \times 5 = \) ___
68. \(3 \times 6 = \) ___
69. \(64 \div 8 = \) ___
70. \(27 \div 3 = \) ___
71. \(7 \times 6 = \) ___
72. \(6 \times 4 = \) ___
73. \(36 \div 4 = \) ___
74. \(28 \div 7 = \) ___
75. \(54 \div 6 = \) ___
76. \(7 \times 4 = \) ___
77. \(8 \times 7 = \) ___
78. \(42 \div 7 = \) ___
79. \(35 \div 5 = \) ___
80. \(63 \div 7 = \) ___
81. \(9 \times 3 = \) ___
82. \(3 \times 7 = \) ___
83. \(32 \div 4 = \) ___
84. \(56 \div 8 = \) ___
85. \(24 \div 6 = \) ___
86. \(4 \times 8 = \) ___
87. \(9 \times 4 = \) ___
88. \(36 \div 6 = \) ___
89. \(49 \div 7 = \) ___
90. \(42 \div 6 = \) ___
91. \(6 \times 6 = \) ___
92. \(6 \times 8 = \) ___
93. \(56 \div 7 = \) ___
94. \(48 \div 6 = \) ___
95. \(81 \div 9 = \) ___
Part 2

1. Which set of base-10 blocks shows the number 34?

   A
   B
   C
   D

2. The number 83 can also be shown as

   A 80 + 3
   B 8 + 3
   C 80 + 30
   D 8 + 30

3. The number 904 can be written as

   A ninety-four
   B nine hundred forty
   C nine hundred four
   D nine thousand four

4. 102, 122, 132, 142, …
   What is the missing number in this counting pattern?

   A 103
   B 111
   C 112
   D 121

5. \(539 = 30 + \ ? + 9\)
   What is the value of the missing number?

   A 5
   B 50
   C 500
   D 578

6. Malaya has 9 large boxes of pencils and 4 small boxes of pencils.

   How many pencils does she have altogether?

   A 94
   B 110
   C 490
   D 940

7. Lucas is 19 years old. Harry is 34.
   How much older than Lucas is Harry?

   A 13 years older
   B 15 years older
   C 25 years older
   D 53 years older
8. Tamika, Maria, and Anthony each have some strawberries.

Which number line shows how to find the total number of strawberries?

A  
B  
C  
D  

9. Anna and Josh had 23 stickers altogether. Josh had 14 stickers. How many stickers did Anna have?

A 9 stickers
B 11 stickers
C 19 stickers
D 37 stickers

10. Maria was playing a computer game. She scored 43 points in Round 1 and 26 points in Round 2. Which one of the following could she use to add the points together?

A 40 + 20 + 3 + 6
B 4 + 3 + 2 + 6
C 40 + 30 + 20 + 60
D 30 + 4 + 60 + 2

11. Miguel bought a piece of pizza and a carton of milk for his lunch at the cafeteria.

milk $1.80  pizza $1.50  

How much did his lunch cost altogether?

A $2.13
B $2.30
C $3.30
D $13.20

12. A number in this sum is covered with paper.

\[
\begin{array}{c}
1 \\
2 \\
4 \\
\end{array}
\quad + \quad
\begin{array}{c}
\phantom{1} \\
\phantom{2} \\
\phantom{4} \\
3 \\
0 \\
1 \\
\end{array}
\]

Which of the following could be used to find the covered number?

A 124 – 301
B 124 + 124
C 301 + 124
D 301 – 124
13. This necklace has 15 beads on it. How many beads would be on 5 necklaces like this one?

A  20 beads  
B  60 beads  
C  75 beads  
D  90 beads

14. Mr. Samson arranged some worksheets in a display. How have the worksheets been arranged?

A  6 rows of 4  
B  6 rows of 5  
C  5 rows of 4  
D  5 rows of 5

15. An ant has 6 legs. Which number is missing from the table below?

<table>
<thead>
<tr>
<th>Number of ants</th>
<th>Number of legs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>?</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>

A  20  
B  22  
C  24  
D  26

16. Mrs. Chi brings her three children to play at KidZone. What is the total cost for her three children to play for half an hour?

A  $12.60  
B  $13.90  
C  $15.50  
D  $16.50
17. 8 \times 3 \text{ gives the same result as}  

A 2 \times 3 + 4 \times 3  
B 5 \times 3 + 3 \times 3  
C 6 \times 3 + 4 \times 3  
D 8 \times 3 + 1 \times 3  

18. Mr. Hakim bakes muffins on trays like this. 

Mr. Hakim’s oven has 3 shelves. Each shelf holds 2 trays of muffins. 
What is the total number of muffins that he can bake at the same time?  

A 24 muffins  
B 36 muffins  
C 48 muffins  
D 72 muffins  

19. Gabby put 6 photos on each page of a photo album.  
The album holds 90 photos.  
How many pages does the album have?  

A 13 pages  
B 15 pages  
C 84 pages  
D 540 pages  

20. Anthony has a total of 28 pet mice.  
He keeps them in 4 cages. Each cage has the same number of mice.  
How many mice are in each cage?  

A 4 mice  
B 7 mice  
C 8 mice  
D 24 mice  

21. Malaya wants to put these 17 flowers into 3 vases.  
She wants to put an equal number into each vase.  
How many flowers will be left over?  

A 2 flowers  
B 3 flowers  
C 5 flowers  
D 6 flowers
22. Some students arranged counters to show $12 \div 3$.
Which student was correct?

A Tran  
B Maria  
C Josh  
D Anna

23. Lisa needs to buy 65 waffles.
What is the least number of boxes of waffles she needs to buy?

A 6 boxes  
B 7 boxes  
C 10 boxes  
D 70 boxes

24. $147 \div 7 =$

A 12  
B 21  
C 101  
D 140