

Long division is used to compute a quotient and remainder!

Review long division on page 60 of the Guide.

EXAMPLE

Find the quotient and remainder of $73 \div 6$.

First, we write the division problem as shown:

$6 \times 10 = 60$, so 6 can go into 73 at least ten times.

We subtract $6 \times 10 = 60$ from 73, and have 13 left over. The remainder cannot be greater than the divisor. Since 13 is greater than 6, we keep dividing.

Six goes into 13 two times, so we add two to the quotient.

We subtract $2 \times 6 = 12$ from 13 and have 1 left over. Since 1 is less than 6, the remainder is 1.

The quotient of $73 \div 6$ is $10 + 2 = 12$, and the remainder is 1.

$$6 \overline{) 73}$$

$$\begin{array}{r} 10 \\ 6 \overline{) 73} \\ - 60 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 10+2 \\ 6 \overline{) 73} \\ - 60 \\ \hline 13 \\ - 12 \\ \hline 1 \end{array}$$

The **dividend** goes here...
...and the **divisor** goes here.
The **quotient** goes here.



PRACTICE

Find the quotient and remainder of each problem below.

74. $5 \overline{) 67}$ quotient = _____
remainder = _____

75. $3 \overline{) 43}$ quotient = _____
remainder = _____

76. $7 \overline{) 64}$ quotient = _____
remainder = _____

77. $4 \overline{) 76}$ quotient = _____
remainder = _____

78. $8 \overline{) 93}$ quotient = _____
 remainder = _____

79. $7 \overline{) 98}$ quotient = _____
 remainder = _____

80. $11 \overline{) 13}$ quotient = _____
 remainder = _____

81. $91 \overline{) 95}$ quotient = _____
 remainder = _____

82. $9 \overline{) 5}$ quotient = _____
 remainder = _____

83. $6 \overline{) 125}$ quotient = _____
 remainder = _____

84. $14 \overline{) 86}$ quotient = _____
 ★ remainder = _____

85. $8 \overline{) 2507}$ quotient = _____
 ★ remainder = _____

86. ★ When Winnie divides n by 8, the quotient is 15 and the remainder is 6.
 What is n ?

86. _____

87. ★ When Lizzie divides 77 by m , the quotient is 9 and the remainder is 5.
 What is m ?

87. _____

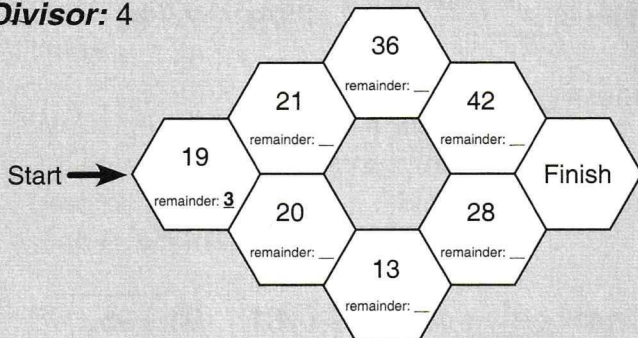
For each of the following Remainder Jump mazes, begin in the hexagon marked "Start." Divide the number in the hexagon by the given divisor. The remainder is the exact number of spaces you must move to reach a new hexagon.

Divide the number in the new hexagon by the given divisor and move again.

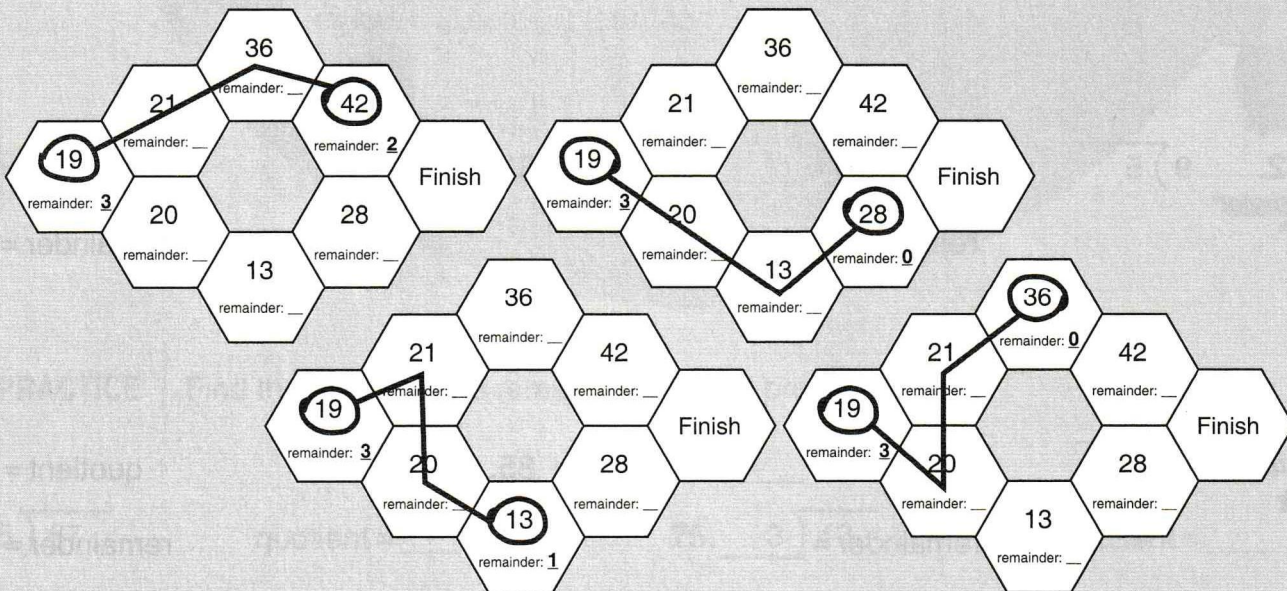
Continue in this way until you land on the hexagon marked "Finish." You may not cross or land on the same hexagon twice.

Trace your final path. Circle each number you land on.

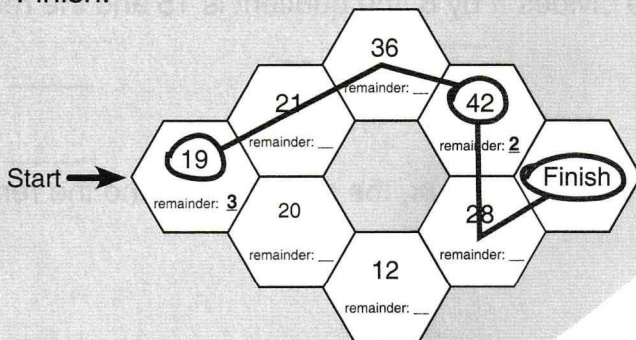
EXAMPLE | Divisor: 4



We begin by dividing $19 \div 4$. Since $19 \div 4$ has remainder **3**, we must move 3 spaces. There are only four possible moves:

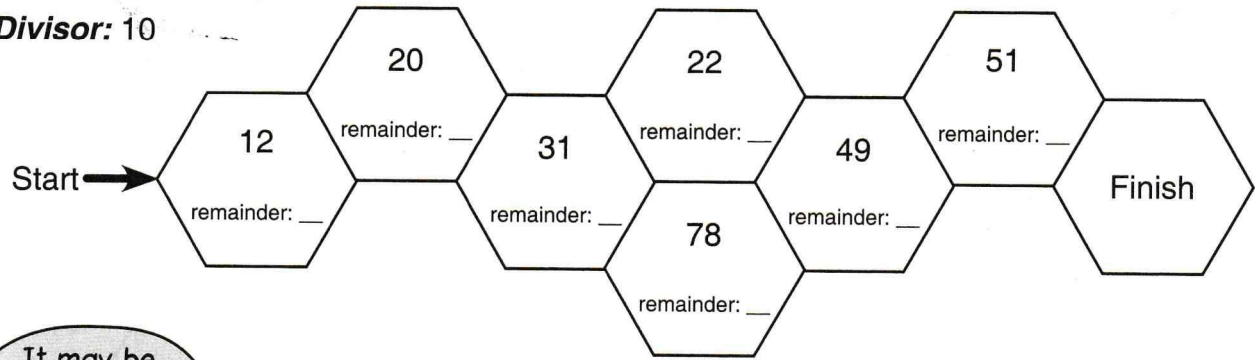


Only landing in the hexagon marked 42 allows us to continue to the hexagon marked "Finish." $42 \div 4$ has remainder **2**. We move 2 spaces as shown to land on the hexagon marked "Finish."



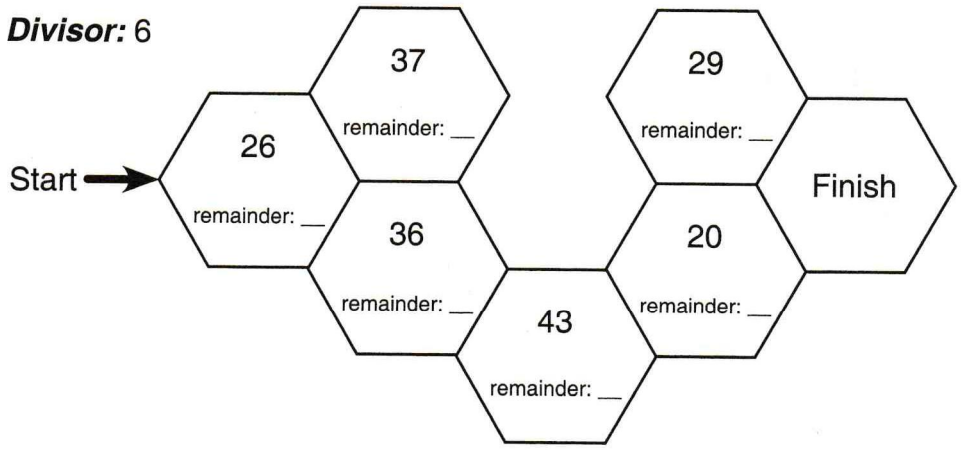
PRACTICE | There is only one correct path to each "Finish" hexagon.

88. **Divisor: 10**

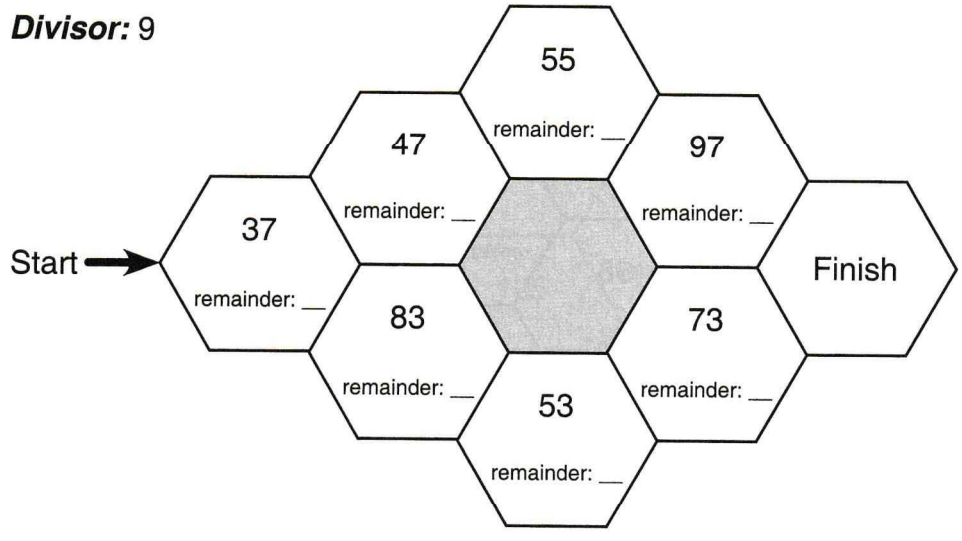


It may be helpful to begin by finding *all* of the remainders.

89. **Divisor: 6**

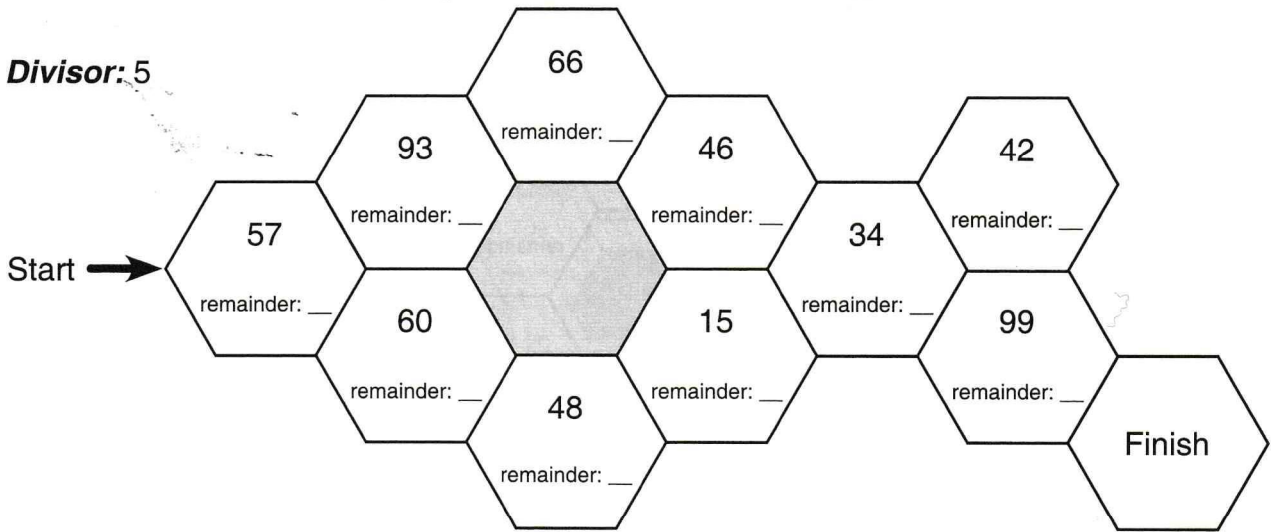


90. **Divisor: 9**

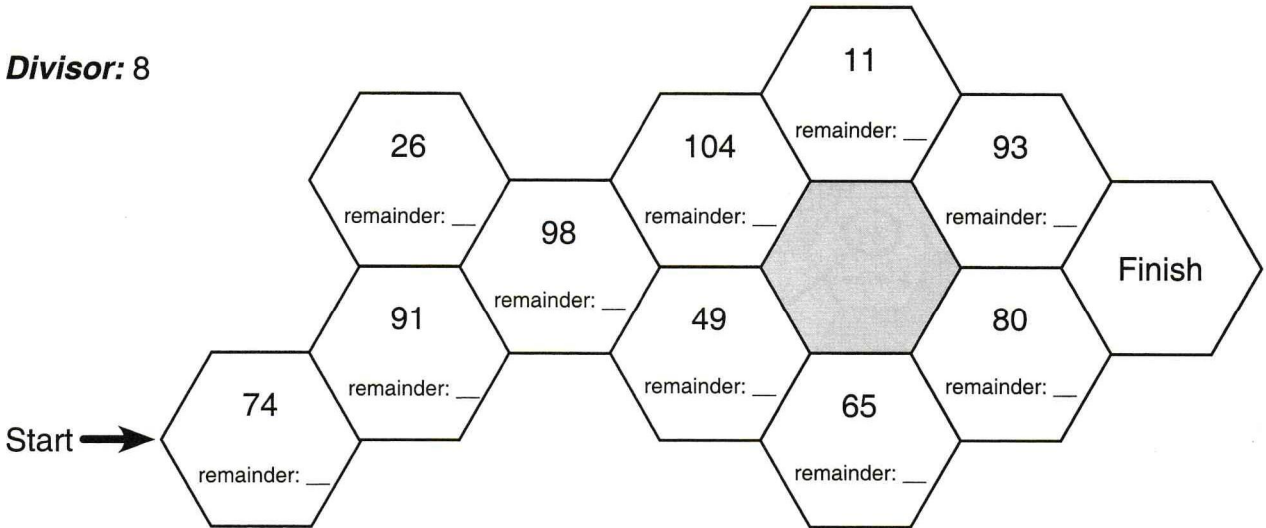


PRACTICE | There is only one correct path to each "Finish" hexagon.

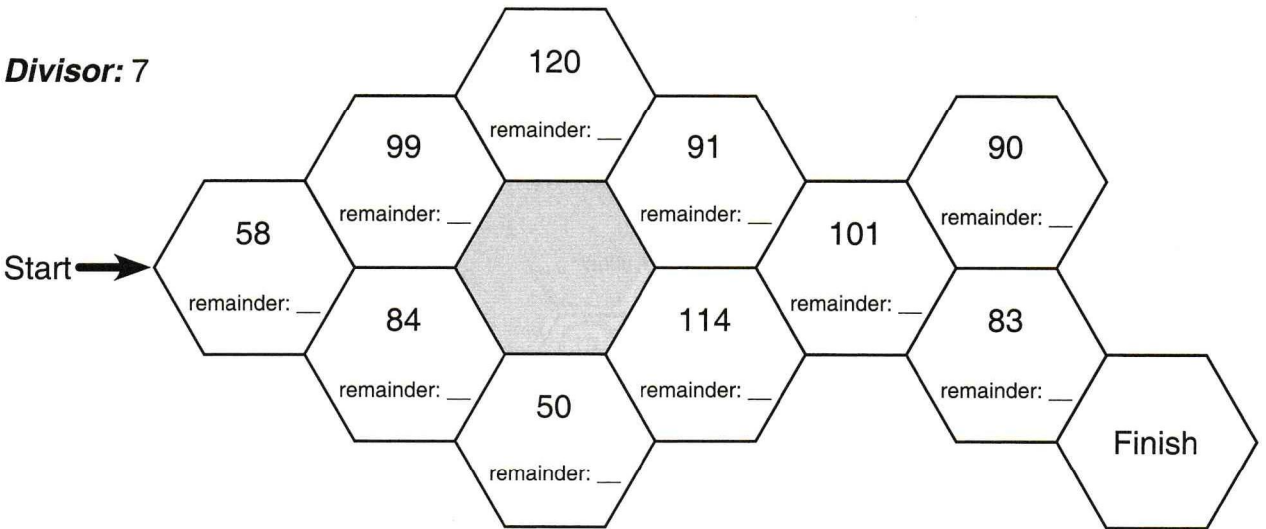
91. **Divisor: 5**
★



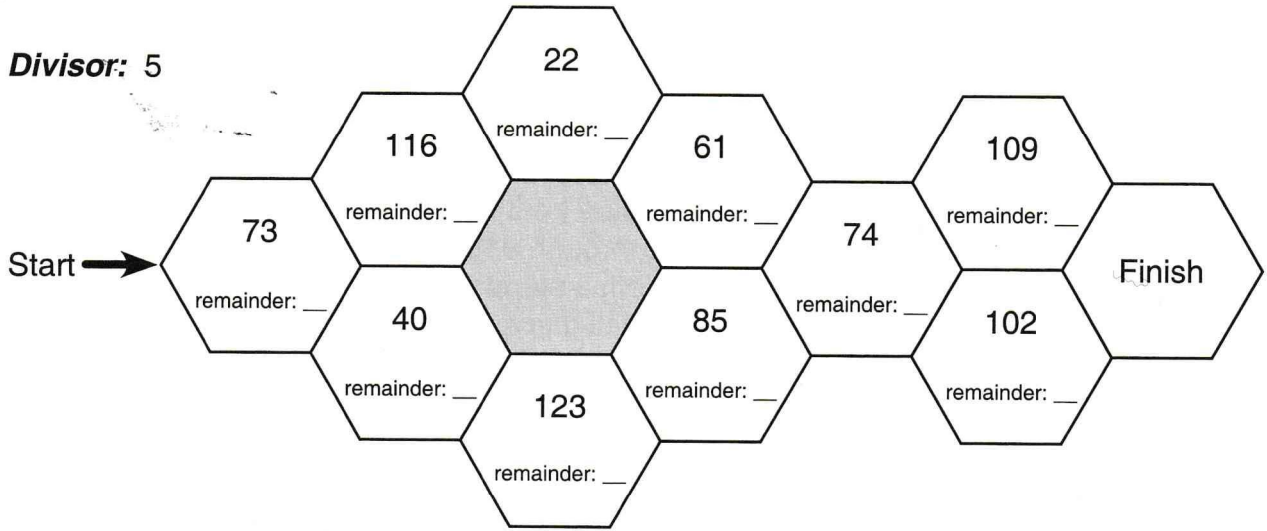
92. **Divisor: 8**
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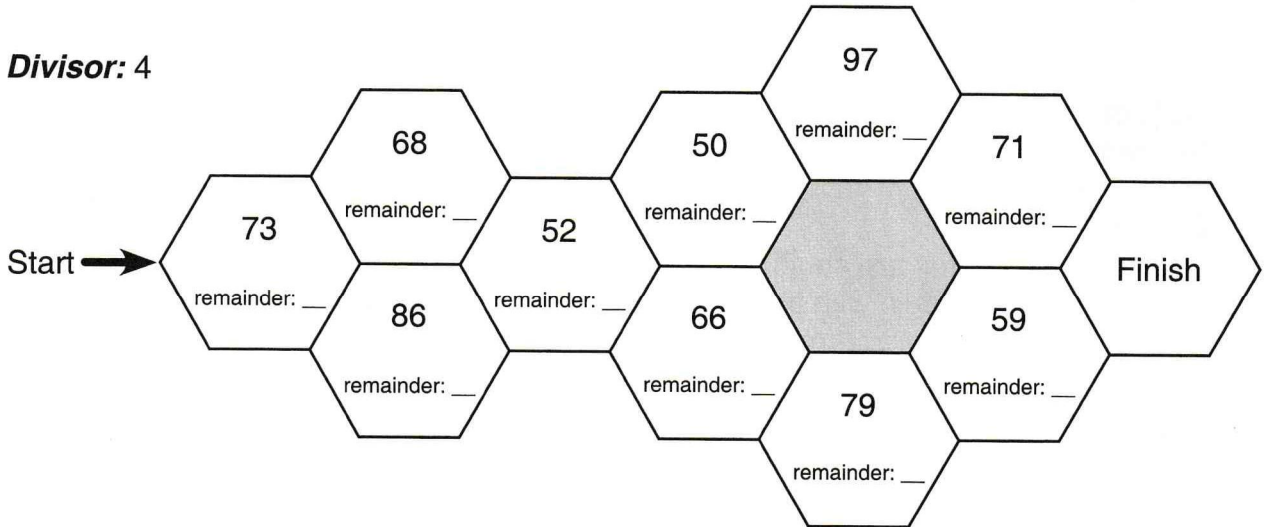
93. **Divisor: 7**
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94. **Divisor: 5**
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95. **Divisor: 4**
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96. **Divisor: 9**
★★
★

