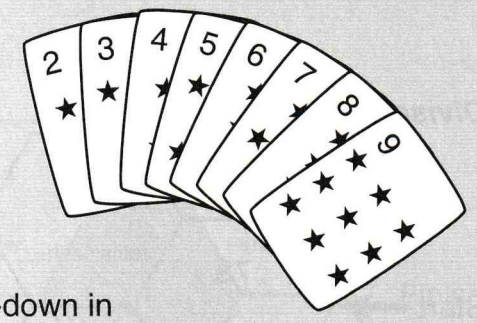
Materials:
Game board, cards numbered 2 through 9 (these can be borrowed from a standard deck of cards), and a small game piece for each player. Sample game boards are on the next two pages. You can print more game boards at BeastAcademy.com, or make your own.

Players:
2 or more.



Object:
Be the first player to reach the "Finish" hexagon.

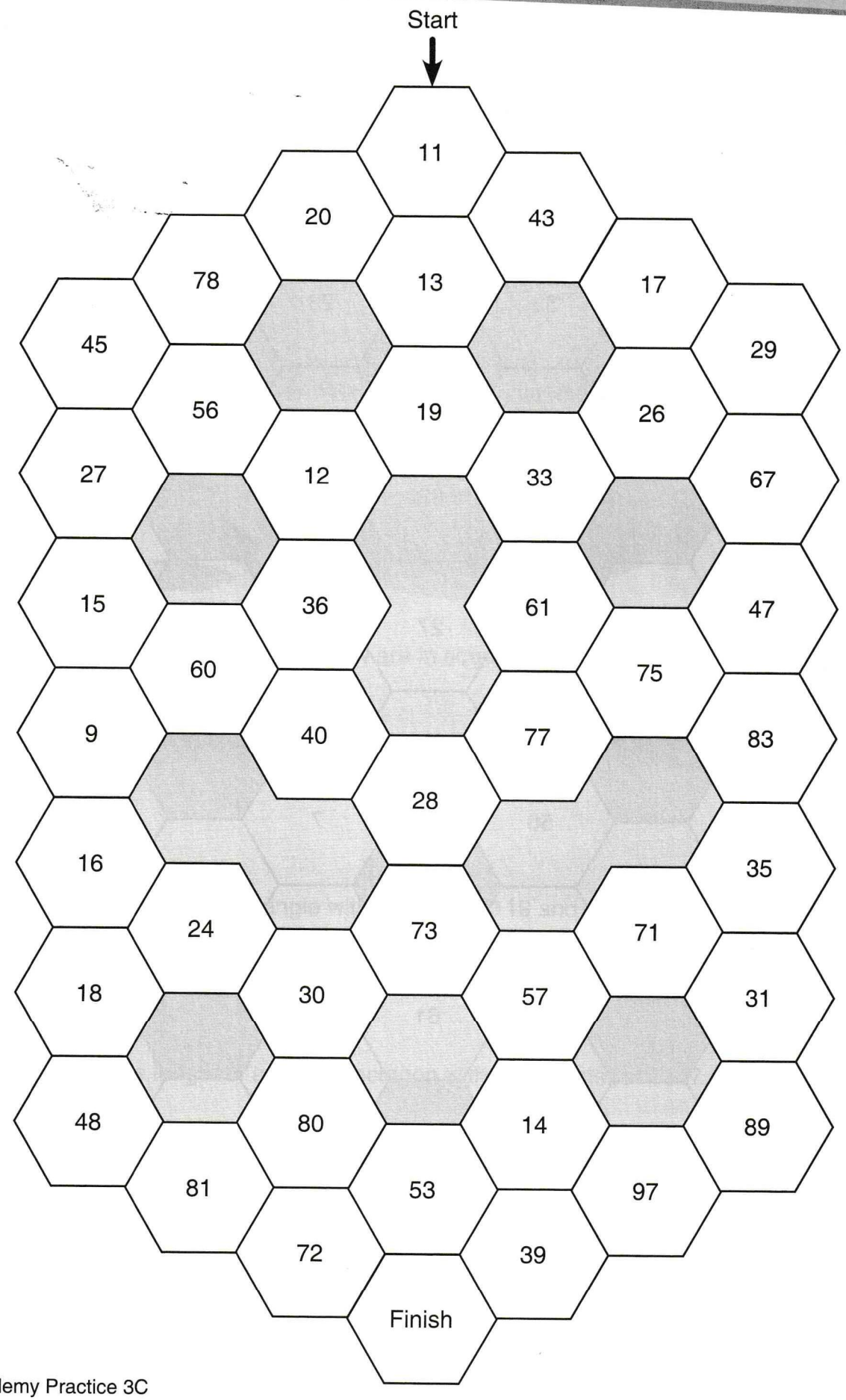
Game Play:
The numbered cards are shuffled and placed face-down in a pile. All players begin with their game pieces in the hexagon marked "Start." Players take turns, starting with the youngest player and continuing to the left.

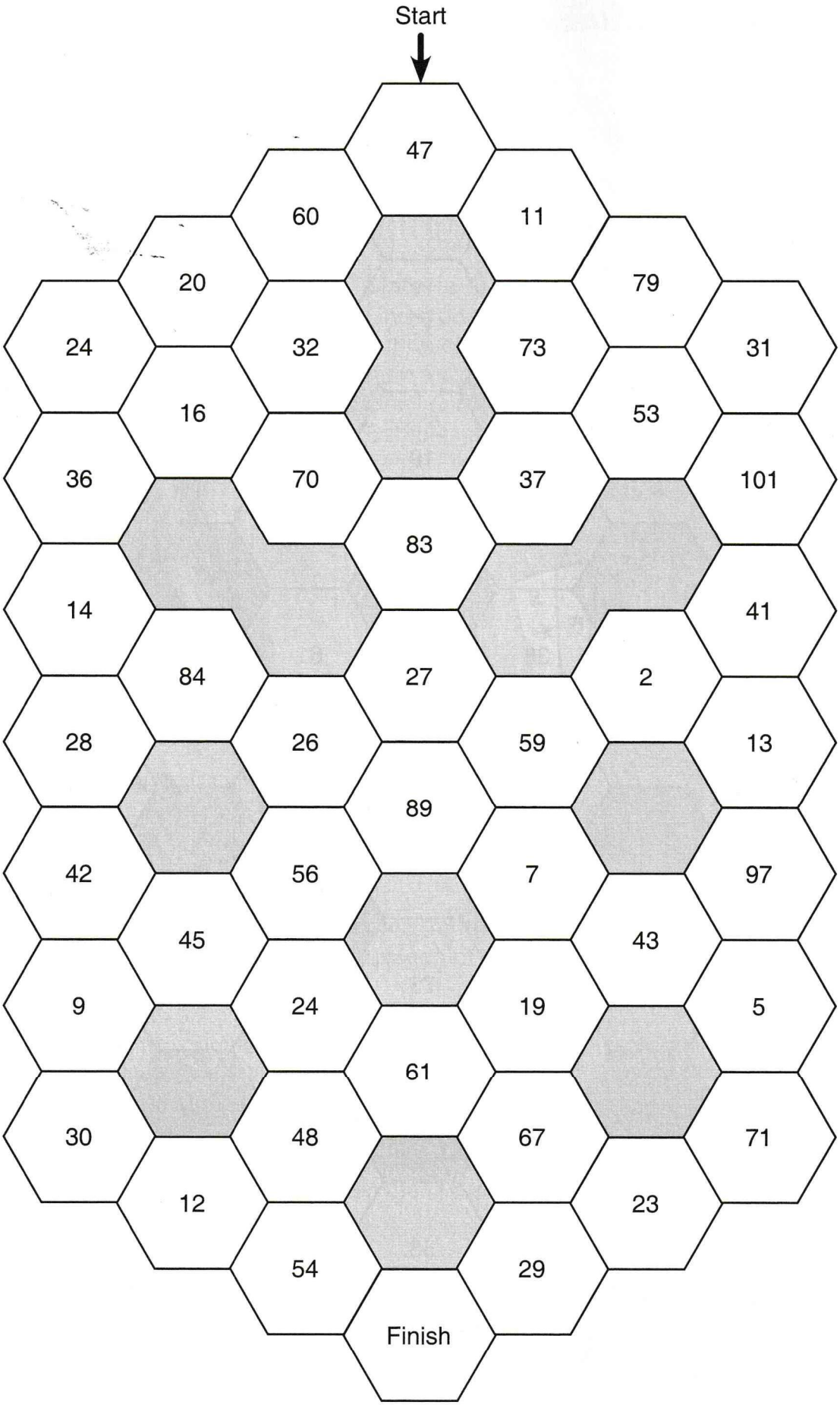
On a player's turn, he or she selects a card from the top of the deck. The player divides the number in the hexagon of his or her game piece by the number on the card.

The remainder is the number of spaces a player may move his or her game piece to reach a new hexagon. Players may move in any direction, but may not visit the same hexagon twice in the same turn.

Players continue drawing cards, dividing, and moving to new hexagons. The first player to end his or her turn on the "Finish" hexagon wins the game!

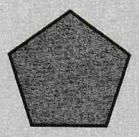
Find more game boards and strategy hints at BeastAcademy.com!


Start
11
20
43
78
13
17
45
29
56
19
26
27
12
33
67
15
36
61
47
60
75
9
40
77
83
28
16
35
24
73
71
18
30
57
31
48
80
14
89
81
53
97
72
39
Finish


Start
47
60
11
20
79
24
32
73
31
16
53
36
70
37
101
83
14
41
84
27
2
28
26
59
13
89
42
56
7
97
45
43
9
24
19
5
61
30
48
67
71
12
23
54
29
Finish

EXAMPLE

What is the side length of a regular pentagon with a perimeter of 115?



A regular pentagon has 5 sides of equal length. So, to find the length of each side, we divide 115 by 5.

$$\begin{array}{r} 20+3 \\ 5\overline{)\,115} \\ -100 \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$$

Since the remainder is 0, we can write

$$115 \div 5 = 20+3 = 23.$$

So, the side length of a regular pentagon with perimeter 115 is **23**.

PRACTICE | The areas given below are in square units.

97. What is the side length of a regular hexagon with a perimeter of 156? **97.** _____

98. What is the height of a rectangle with an area of 119 and width 7? **98.** _____

99. What is the side length of a regular octagon with a perimeter of 184? **99.** _____

100. Ralph draws a regular polygon with perimeter 108 and side length 9. How many sides does Ralph's polygon have? **100.** _____

The areas given below are in square units.

EXAMPLE

A rectangle with height 5 and width 18 has an area of 90. What is the width of a rectangle with the same area and height 18?

To find the area of a rectangle, we can multiply its height by its width. So, to find the width of a rectangle, we can divide its area by its height: $90 \div 18$.

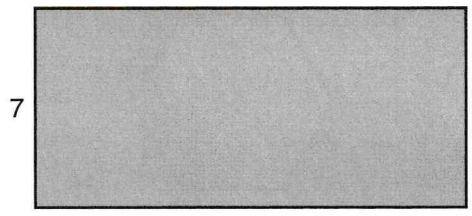
To divide $90 \div 18$, we find the number that can be multiplied by 18 to get 90.

Since the first rectangle has height 5, width 18, and area 90, we know $5 \times 18 = 90$. So, 5 can be multiplied by 18 to get 90. Therefore, $90 \div 18 = 5$.

So, a rectangle with an area of 90 and height 18 has width **5**.

PRACTICE

101. The rectangle below has area 105 and height 7. What is the width of the rectangle? **101.** _____



102. A rectangle has area 105 and height 15. What is the width of the rectangle? **102.** _____

Use the following for Problems 103 and 104:
Lizzie and Grogg each have 117 markers.

103. Lizzie's markers are organized into packs of 9. How many packs of markers does Lizzie have? **103.** _____

104. Grogg's markers are stuffed into packs of 13. How many packs of markers does Grogg have? **104.** _____

105. If Captain Kraken divides 322 coins from a treasure chest into piles of 14, he can make 23 piles. How many piles of coins can Captain Kraken make if he divides the 322 coins into piles of 23?

105. _____

106. There are 7 days in a week, and 24 hours in each day. So, there are $7 \times 24 = 168$ hours in one week. How many weeks are there in 168 days?

106. _____

107. If $n \div 4 = 5$, what is $n \div 5$?

107. _____

108. ★ If $n \div 151 = 239$, what is $n \div 239$?

108. _____

109. ★ If $64 \div m = n$, what is $64 \div n$?

109. _____

110. ★ If $a \div b = c$, what is $a \div c$? (Assume that a, b, and c are not zero.)

110. _____