

Grade 5 · Place Value and Powers of 10 · Test

Common Core 5.NBT.A.1, 5.NBT.A.2 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

This test covers place value and powers of 10 (5.NBT.A.1 and 5.NBT.A.2). It has 9 questions worth 20 points in total. Show your work, write units where they are needed, and keep digits aligned in the place-value charts.

Test information

- **Grade:** Grade 5
- **Chapter:** Place Value and Powers of 10
- **Common Core:** 5.NBT.A.1, 5.NBT.A.2
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 2 pts; Question 7: 3 pts; Question 8: 3 pts; Question 9: 2 pts)

Question 1: Place value relationships (2 points)

The chart shows 770.

Hundreds	Tens	Ones
7	7	0

Place-value chart for 770.

- How many times as much is the value of the left 7 as the value of the right 7? (1 point)
- The 7 in the tens place is what fraction of the 7 in the hundreds place? (1 point)

Question 2: Powers of 10 (2 points)

- Write $10 \times 10 \times 10 \times 10$ as a power of 10 and find its value. (1 point)
- Write 10^6 as a number. (1 point)

Question 3: Multiplying decimals (2 points)

- 5.6×10^2 (1 point)
- 0.047×10^3 (1 point)

Question 4: Dividing by powers of 10 (2 points)

- a. $3,400 \div 10^2$ (1 point)
- b. $6 \div 10^3$ (1 point)

Question 5: Missing exponents (2 points)

Write the exponent that makes each equation true.

- a. $7.1 \times 10^? = 7,100$ (1 point)
- b. $25 \div 10^? = 0.025$ (1 point)

Question 6: Complete the table (2 points)

Start	Operation	Result
0.52	$\times 10$	a
0.52	$\times 10^3$	b
0.52	$\div 10$	c
0.52	$\div 10^2$	d

Find the result in each row. Rows a and b together are worth (1 point), rows c and d together (1 point).

Question 7: Check Noah's work (3 points)

Noah says that $4.06 \times 10^2 = 40.6$.

Hundreds	Tens	Ones	tenths	hundredths
Number: 4.06				
		4	0	6

Place-value chart for 4.06.

- a. Find the correct value of 4.06×10^2 . (1 point)
- b. Explain Noah's mistake using place value. (2 points)

Question 8: Raffle tickets (3 points)

Maya's school sells 10^2 raffle tickets for \$2.50 each. The money is shared equally among 10^1 classes.

- a. Find the total money collected. (2 points)
- b. Find the amount each class gets. (1 point)

Question 9: Digits in 7.77 (2 points)

The chart shows 7.77.

Ones	tenths	hundredths
7	7	7

Place-value chart for 7.77.

- Write the value of the 7 in the tenths place and the 7 in the hundredths place. (1 point)
- How many times as much is the tenths 7 as the hundredths 7? (1 point)