

Grade 5 · Reading, Comparing and Rounding Decimals · Worksheet Answer Key

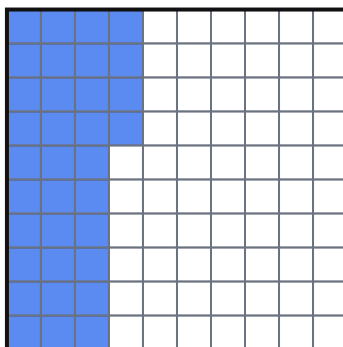
Common Core 5.NBT.A.3, 5.NBT.A.4 · mathovore.fr

Each solution names the place being used, shows the comparison or rounding step and gives the final answer in bold. If an answer differs, check the digit to the right of the rounding place and whether the decimal points were lined up.

Grade 5 Common Core: 5.NBT.A.3 · 5.NBT.A.4

Problem 1: Reading a hundredths grid

Thirty-four of the 100 squares are shaded, so the decimal is 0.34.



0.34

3 full columns of tenths and 4 extra squares.

0.34 = thirty-four hundredths

Problem 2: Decimals in words

- a. **six and eight hundredths**: the last digit, 8, is in the hundredths place.
- b. **two hundred seventy-five thousandths**: the last digit, 5, is in the thousandths place.

Problem 3: Words to numerals

- a. Three decimal places for thousandths, with a 0 in the tens place of 407: 12.407.
- b. One decimal place: 9.8.
- c. Two decimal places and no whole part: 0.52.

Problem 4: Value of each digit

- a. The 9 is in the tenths place: **9 tenths**, which is 0.9.

- b. The 3 is in the hundredths place: **3 hundredths**, which is 0.03.
 c. The 6 is in the thousandths place: **6 thousandths**, which is 0.006.

Problem 5: Expanded form with fractions

Match every digit with its place: 4 ones, 7 tenths, 2 hundredths and 5 thousandths.

Ones	tenths	hundredths	thousandths
4	7	2	5

Each digit is multiplied by its place value.

$$4.725 = 4 \times 1 + 7 \times \frac{1}{10} + 2 \times \frac{1}{100} + 5 \times \frac{1}{1000}$$

Problem 6: Expanded form practice

- a. $0.368 = 3 \times \frac{1}{10} + 6 \times \frac{1}{100} + 8 \times \frac{1}{1000}$. **Done.**
 b. $15.04 = 1 \times 10 + 5 \times 1 + 4 \times \frac{1}{100}$. The tenths digit is 0, so there is no tenths term. **Done.**

Problem 7: From expanded form to a decimal

- a. 7 tens, 2 ones, 5 tenths, 0 hundredths, 9 thousandths: 72.509.
 b. 6 ones, 0 tenths, 4 hundredths: 6.04.

Problem 8: Expanded form with decimals

3 ones, 4 tenths, 7 hundredths, 2 thousandths: $3 \times 1 + 4 \times 0.1 + 7 \times 0.01 + 2 \times 0.001$.

$$3.472 = 3 \times 1 + 4 \times 0.1 + 7 \times 0.01 + 2 \times 0.001$$

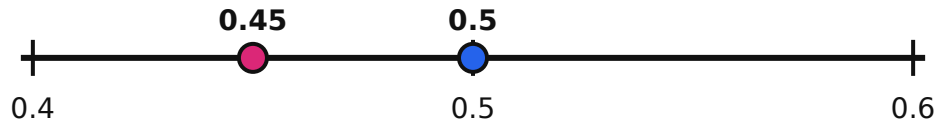
Problem 9: Same amount?

Both grids have 60 of 100 squares shaded. Six tenths and sixty hundredths are the same amount.

$$0.6 = 0.60$$

Problem 10: Comparing tenths and hundredths

Write 0.5 as 0.50. Compare tenths first: 4 tenths and 5 tenths. Since 4 is less than 5, 0.45 is left of 0.5 on the number line.



The point farther left is the lesser number.

$$0.45 < 0.5$$

Problem 11: Comparing to thousandths

- a. $3.482 > 3.428$. Tenths tie at 4; hundredths: 8 is greater than 2.
- b. $0.707 < 0.77$. Compare tenths: 7 and 7; hundredths: 0 and 7.
- c. $12.09 = 12.090$. A zero at the end changes nothing.
- d. $5.1 > 5.099$. Write 5.1 as 5.100; then 100 thousandths $>$ 99 thousandths.

Problem 12: Close decimals

- a. $0.5 > 0.499$: 500 thousandths is more than 499 thousandths.
- b. $2.30 = 2.3$: the zero at the end does not change the value.
- c. $0.08 < 0.1$: 8 hundredths is less than 10 hundredths.

Problem 13: Ordering decimals

Write each with 3 decimal places: 0.720, 0.702, 0.270, 0.700. Order the thousandths: 270, 700, 702, 720.

0.27, 0.7, 0.702, 0.72

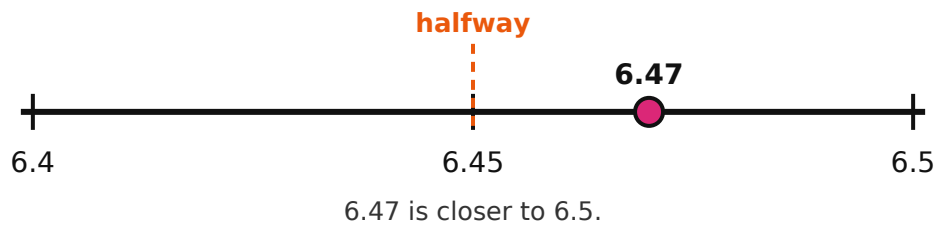
Problem 14: Ordering from greatest to least

Write each with 3 decimal places: 4.090, 4.900, 4.089, 4.091. The greatest is 4.900, then 4.091, then 4.090, then 4.089.

4.9, 4.091, 4.09, 4.089

Problem 15: Rounding to a tenth and a whole number

Tenths: look at the hundredths digit, 7. Since 7 is 5 or more, round up: 6.5. Whole number: look at the tenths digit, 4. Since 4 is less than 5, keep 6.



Nearest tenth: 6.5. Nearest whole number: 6.

Problem 16: Three roundings

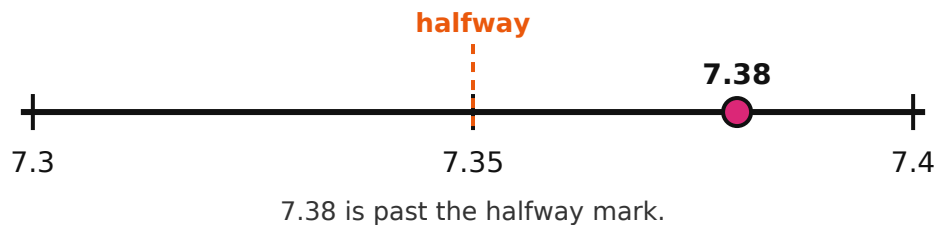
- a. Tenths digit is 8, so round up: 4.
- b. Hundredths digit is 4, so keep the 8: 3.8.
- c. Thousandths digit is 6, so round up the 4: 3.85.

Problem 17: Rounding up to a new whole

- a. Thousandths digit is 5, so round up 0.99 to 1.00.
- b. Hundredths digit is 9, so round up 0.9 to 1.0.
- c. Tenths digit is 9, so round up 0 to 1.

Problem 18: Rounding on a number line

7.38 is between 7.3 and 7.4. The halfway mark is 7.35, and 7.38 is to the right of it, so it is closer to 7.4.



Between 7.3 and 7.4; rounds to 7.4.

Problem 19: Halfway cases

- a. The tenths digit is 5, so round up: 250.
- b. The thousandths digit is 9, so round up 18.24 to 18.25.
- c. The hundredths digit is 5, so round up 4.0 to 4.1.

Problem 20: Find the error

Aisha ignored the places. Compare the tenths: 0.38 has 3 tenths and 0.4 has 4 tenths. Writing

0.4 as 0.40 shows 40 hundredths, which is more than 38 hundredths.

$0.38 < 0.4$

Problem 21: Sprint times

Use 2 decimal places: 12.48, 12.50, 12.39. Order: 12.39, 12.48, 12.50.

12.39, 12.48, 12.5. **Noah won because the least time is the fastest.**

Problem 22: Gas price

Nearest cent (hundredth): the thousandths digit is 9, so round up: \$3.46. Nearest dime (tenth): the hundredths digit is 5, so round up: \$3.5, or \$3.50.

\$3.46 and \$3.50

Problem 23: Rainfall

Use 3 decimal places: 0.350, 0.305, 0.300. Order from greatest: Monday, Tuesday, Wednesday. Tuesday: the hundredths digit is 0, so keep the tenths digit: 0.3.

Monday, Tuesday, Wednesday; Tuesday rounds to 0.3 inch.

Problem 24: Mixed nuts

Nearest tenth: the hundredths digit is 7, so round up: 2.7. Nearest hundredth: the thousandths digit is 5, so round up: 2.68.

2.7 pounds and 2.68 pounds

Problem 25: Batting averages

Compare tenths and hundredths: 0.315, 0.310, 0.301, 0.299.

0.315, 0.31, 0.301, 0.299. **Ethan has the best average.**

Problem 26: Ribbons

- Use 3 decimal places: 3.125, 3.250, 3.200. 3.125, 3.2, 3.25.
- 3.125 has hundredths digit 2, so it rounds to 3.1. 3.2 stays 3.2. 3.25 has hundredths digit 5, so it rounds up to 3.3. **3.1, 3.2, 3.3.**