Math Solutions: Types of Numbers, Fractions, and Decimals

Exercise 1.1.6: Type of Numbers

1. 7.722 to 2 dp (decimal places)

To round to 2 decimal places, we look at the digit in the third decimal place:

- Original number: 7.722
- Third decimal digit is 2
- Since 2 < 5, we round down
- Result: **7.72**

2. 46.7885 to 3 dp

To round to 3 decimal places, we look at the digit in the fourth decimal place:

- Original number: 46.7885
- Fourth decimal digit is 5
- Since 5 ≥ 5, we round up
- Result: **46.789**

3. 797.87666 to 4 dp

To round to 4 decimal places, we look at the digit in the fifth decimal place:

- Original number: 797.87666
- Fifth decimal digit is 6
- Since 6 > 5, we round up
- Result: **797.8767**

4. 66.652 to the nearest whole number

To round to the nearest whole number, we look at the first decimal place:

- Original number: 66.652
- First decimal digit is 6
- Since 6 > 5, we round up
- Result: **67**

5. 12569 to the nearest 10

To round to the nearest 10, we look at the units digit:

- Original number: 12569
- Units digit is 9
- Since 9 > 5, we round up
- Result: **12570**

6. 12569 to the nearest 100

To round to the nearest 100, we look at the tens digit:

- Original number: 12569
- Tens digit is 6
- Since 6 > 5, we round up
- Result: **12600**

7. 12539 to the nearest 1000

To round to the nearest 1000, we look at the hundreds digit:

- Original number: 12539
- Hundreds digit is 5
- Since 5 = 5, we round up (convention for midpoint values)
- Result: **13000**

8. 12539 to the nearest 10000

To round to the nearest 10000, we look at the thousands digit:

- Original number: 12539
- Thousands digit is 2
- Since 2 < 5, we round down
- Result: **10000**

9. 8.7321 to 2 sf (significant figures)

To round to 2 significant figures:

- Original number: 8.7321

- First significant figure: 8
- Second significant figure: 7
- Third significant figure: 3
- Since 3 < 5, we round down
- Result: **8.7**

10. Estimate: (49.88 / √99.57) - 3.2499

Let's round each number to the nearest whole number:

- 49.88 ≈ 50
- √99.57 ≈ √100 = 10
- 3.2499 ≈ 3

Now we calculate:

- 50 ÷ 10 = 5
- 5 - 3 = 2
- Estimated result: **2**