Rounding off, adding, and subtracting decimals worksheet.

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Rounding off Remember: To round off a number to a given round-off place,

1. Preserve the digit in the round-off place if the right-neighboring digit is less than 5; otherwise, increase the digit in the round-off place by 1;
2. Replace all digits to the right of the round-off place by 0s;
3. Eliminate insignificant 0s (except a 0 in the round-off place).

Example: Round off 24.74 to the nearest tenth. The digit at the tenths place is 7. The digit after is 4. Since 4 is less than 5, we preserve the 7 and we erase everything after the 7: $24.74 \approx 24.7$.

Example: Round off 12.738 to the nearest hundredth. The digit at the hundredths place is 3. The digit after is 8. Since 8 is greater than 5, we increase the 3 by 1 to get 4 in the round-off place and erase everything after the round-off place: $12.738 \approx 12.74$.

Example: Round off 1.1796 to the nearest thousandth. The digit at the thousandth place is 9. The digit after is 6. Since 6 is greater than 5, we increase the 9 by 1 to get 10, carry 1 to the 7 to get 8, and erase everything after the round-off place: $1.1796 \approx 1.180$.

Exercises: Round off the following numbers.

1. 3.45 to the nearest tenth.
2. 13.523 to the nearest tenth.
3. 45.799 to the nearest hundredth.
4. 56.79 to the nearest ten.
5. 123.112 to the nearest tenth.
6. 41.398 to the nearest hundredth.

Adding and subtracting decimals Remember: Add or subtract decimals

1. Line up all the numbers so that all the decimal points are aligned. If one of the numbers has no decimal point, put the decimal point at the end of the number.
2. Add as usual, keeping the decimal point at the same place

Example: Add $34.75 + 12.64$.

$$\begin{array}{r} 34.75 \\ +\ 12.64 \\ \hline 47.39 \end{array}$$

Example: Subtract $435.76 - 52.64$.

$$\begin{array}{r} 435.76 \\ -\ 52.64 \\ \hline 383.12 \end{array}$$

Exercises. Add or subtract, as indicated.

7. $45.23 + 5.13$
8. $125.12 + 4.81$
9. $32.145 + 52.16$
10. $45.23 - 5.13$
11. $125.12 - 4.81$
12. $12.045 + 52$
13. $45.3 - 5.136$
14. $1.12 + 8.39$
15. $31.541 - 4$
16. $3.332 - 2.645$
17. $1765.1 + 4.5456$
18. $3.1415 - 0.17$
19. $4.2 - 4.19$
20. $165 - 8.31$
21. $3.634 + 54.16$