

Thursday Homework

Practice 2.2

Solve. Show your work. Round the coefficient to the nearest tenth.

1 $6.3 \cdot 10^{-2} + 4.9 \cdot 10^{-2}$

2 $7.2 \cdot 10^2 - 3.5 \cdot 10^2$

3 $3.8 \cdot 10^3 + 5.2 \cdot 10^4$

4 $8.1 \cdot 10^5 - 2.8 \cdot 10^4$

Use the table to answer questions 5 to 9.

The table shows the amounts of energy, in Calories, contained in various foods.

Food (per 100 g)	Energy (Cal)
Chicken breast	$1.71 \cdot 10^5$
Raw potato	$7.7 \cdot 10$
Cabbage	$2.5 \cdot 10^4$
Salmon	$1.67 \cdot 10^5$

5 Find the total energy in each food combination. Write your answer in scientific notation. Round coefficients to the nearest tenth.

a) Chicken breast and cabbage

b) Cabbage and raw potato

6 How many more Calories are in chicken breast than in salmon?

7 How many more Calories are in salmon than in cabbage?

Solve. Show your work.

- 8** A flight from Singapore to New York includes a stopover at Hawaii. The distance between Singapore and Hawaii is about $6.7 \cdot 10^3$ miles. The distance between New York and Hawaii is about $4.9 \cdot 10^3$ miles. Write each sum or difference in scientific notation.
- Find the total distance from Singapore to New York.
 - Find the difference in the length of the two flights.
- 9** Angora wool, obtained from rabbits, has fibers with a diameter of about $1 \cdot 10^{-6}$ meter. Cashmere, obtained from goats, has fibers with a diameter of about $1.45 \cdot 10^{-5}$ meter. Write your answers in the appropriate unit in prefix form.
- Find the sum of the diameters of the two types of fiber.
 - How much wider is the cashmere fiber than the angora fiber?

The average distances of three planets from the Sun are shown in the diagram. Use this information for questions **10** to **13**. Express your answers in kilometers.

- 10** What is the closest Mercury comes to Earth when both are at an average distance from the Sun?
- 11** What is the closest Saturn comes to Mercury when both are at an average distance from the Sun?
- 12** What is the closest Saturn comes to Earth when both are at an average distance from the Sun?
- 13** Is the distance you found in **12** greater or less than the average distance from Earth to the Sun? Explain.

