

Number
Unit 3 Line Master 2

Writing Powers in Different Forms

1. Write each power in expanded form and standard form.
What do you notice?

$$2^{-1}, 2^{-2}, 2^{-3}$$

2. Write each power in as many ways as you can.

a) $\frac{1}{5^3}$

b) 3^{-4}

3. Determine the value of x. Explain your thinking.

$$x^{-6} = \frac{1}{64}$$

4. A common male house fly (*musca domestica*) has an average weight of about 10^{-2} grams. Represent this weight in as many ways as you can.

5. Use 5 digits from 0 to 9. A digit may be used more than once.
Place one digit in each box to make this equation true.
How many different combinations of digits can you find?

$$\boxed{} - \boxed{} = \frac{\boxed{}}{\boxed{}\boxed{}}$$