A picture containing drawing

Description automatically generated**Basic Laws of Indices GREEN**

1. Write each of the following using index notation:

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

2. Work out the value of each of the following:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

3. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

g. h. i.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

j. k. l.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

4. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

5. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

6. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

7. Simplify each of the following, giving your answer in its simplest form:

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

8. Simplify each of the following, giving your answer in its simplest form:

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

A picture containing drawing

Description automatically generated**Basic Laws of Indices AMBER**

1. Write each of the following using index notation:

The power or index tells you how many times the number has been multiplied by itself.

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

2. Work out the value of each of the following:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

3. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

g. h. i.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

j. k. l.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

4. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

5. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

6. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

7. Simplify each of the following, giving your answer in its simplest form:

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

8. Simplify each of the following, giving your answer in its simplest form:

Calculate with the numbers, then calculate with the indices separately.

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

A picture containing drawing

Description automatically generated**Basic Laws of Indices RED**

1. Write each of the following using index notation:

The power or index tells you how many times the number has been multiplied by itself.

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

2. Work out the value of each of the following:

a. b. c.

\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

3. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_ \_\_\_\_\_\_\_\_\_\_

g. h. i.

\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

j. k. l.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

4. Simplify the following expressions, giving your answer in index notation:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

5. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

d. e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

6. Fill in the missing numbers:

a. b. c.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

7. Simplify each of the following, giving your answer in its simplest form:

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

8. Simplify each of the following, giving your answer in its simplest form:

Calculate with the numbers, then calculate with the indices separately.

a. b.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

c. d.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

e. f.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_