

# Rounding & Standard Form

# Things we will cover in this presentation

- Rounding to a given number of decimal places.
- Rounding to a given number of significant figures.
- Converting numbers to standard form.

# Things we will cover in this presentation

- Rounding to a given number of decimal places.
- Rounding to a given number of significant figures.
- Converting numbers to standard form.

You have covered the above topics in preIB, so this is just a reminder.

# Rounding

Given any number there are two predominant ways of rounding it:

# Rounding

Given any number there are two predominant ways of rounding it:

- using a specific number of decimal places (d.p.),

# Rounding

Given any number there are two predominant ways of rounding it:

- using a specific number of decimal places (d.p.),
- using a specific number of significant figures (s.f.)

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point.

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:



## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

4 d.p.: 6546.5465

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

4 d.p.: 6546.5465

Note that we can also round this number to:

the nearest unit: 6547

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

4 d.p.: 6546.5465

Note that we can also round this number to:

the nearest unit: 6547

the nearest ten: 6550

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

4 d.p.: 6546.5465

Note that we can also round this number to:

the nearest unit: 6547

the nearest ten: 6550

the nearest hundred: 6500

## Rounding - decimal places

When rounding to decimal places we round to a certain position after the decimal point. Let's take the number 6546.54654 as an example. We will round it to:

1 d.p.: 6546.5

2 d.p.: 6546.55

3 d.p.: 6546.547

4 d.p.: 6546.5465

Note that we can also round this number to:

the nearest unit: 6547

the nearest ten: 6550

the nearest hundred: 6500

the nearest thousand: 7000



## Rounding - decimal places - exercises

Round the given given number accordingly:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

i. 1 d.p.:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

i. 1 d.p.: 25.5

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

i. 1 d.p.: 25.5

ii. nearest unit: 26

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52



## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.:

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1



## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000
- ii. nearest ten:

## Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000
- ii. nearest ten: 54000

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000
- ii. nearest ten: 54000
- iii. 2 d.p.:

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000
- ii. nearest ten: 54000
- iii. 2 d.p.: 54001.10

# Rounding - decimal places - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 d.p.: 25.5
- ii. nearest unit: 26
- iii. 2 d.p.: 25.52

b) 321.0990

- i. 3 d.p.: 321.099
- ii. nearest hundred: 300
- iii. 2 d.p.: 321.10

c) 54001.1

- i. nearest hundred: 54000
- ii. nearest ten: 54000
- iii. 2 d.p.: 54001.10

## Rounding - decimal places

It is very important to realize the difference between the following numbers 1625.00, 1625.0 and 1625.



## Rounding - decimal places

It is very important to realize the difference between the following numbers 1625.00, 1625.0 and 1625.

If an answer to certain problem is given as 1625.00, it means that the answer is accurate to 2 d.p., so the actual answer can be any number  $x$ , such that  $1624.995 \leq x < 1625.005$ .

## Rounding - decimal places

It is very important to realize the difference between the following numbers 1625.00, 1625.0 and 1625.

If an answer to certain problem is given as 1625.00, it means that the answer is accurate to 2 d.p., so the actual answer can be any number  $x$ , such that  $1624.995 \leq x < 1625.005$ .

If however the answer is given as 1625, then this is correct to the nearest unit, so the actual number can be any number  $x$ , such that  $1624.5 \leq x < 1625.5$ .

## Rounding - decimal places

What's the conclusion of all this?

## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is

## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is 444.60

## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is 444.60 and **not** 444.6.

## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is 444.60 and **not** 444.6. The 0 at the end is important because it indicates the accuracy of the rounding.

## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is 444.60 and **not** 444.6. The 0 at the end is important because it indicates the accuracy of the rounding.

Of course  $444.60 = 444.6$ , but the rounded answer 444.60 indicates that the actual answer was between 444.595 and 444.605,



## Rounding - decimal places

What's the conclusion of all this? If you were to round 444.5971 to 2 d.p. then the answer is 444.60 and **not** 444.6. The 0 at the end is important because it indicates the accuracy of the rounding.

Of course  $444.60 = 444.6$ , but the rounded answer 444.60 indicates that the actual answer was between 444.595 and 444.605, while the rounded answer 444.6 indicates only that the actual answer was between 444.55 and 444.65.

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros).

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545.

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

Now consider the number 918273.222,



## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

Now consider the number 918273.222, we will round it to

4 s.f.: 918300

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

Now consider the number 918273.222, we will round it to

4 s.f.: 918300

3 s.f.: 918000

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

Now consider the number 918273.222, we will round it to

4 s.f.: 918300

3 s.f.: 918000

2 s.f.: 920000

## Rounding - significant figures

We count significant figures starting from the first non-zero digit from the left and then count **every** digit (including the zeros). Consider the number 0.004500545. We will round it to

1 s.f.: 0.005

2 s.f.: 0.0045

3 s.f.: 0.00450

4 s.f.: 0.004501

Now consider the number 918273.222, we will round it to

4 s.f.: 918300

3 s.f.: 918000

2 s.f.: 920000

1 s.f.: 900000

# Rounding - significant figures - exercises

Round the given given number accordingly:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30



# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.:

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.:

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

i. 3 s.f.:

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

i. 3 s.f.: 321

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.:



# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1

# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

i. 3 s.f.: 321

ii. 4 s.f.: 321.1

iii. 5 s.f.: 321.10

c) 0.002999

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

i. 3 s.f.: 321

ii. 4 s.f.: 321.1

iii. 5 s.f.: 321.10

c) 0.002999

i. 1 s.f.:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

i. 1 s.f.: 30

ii. 2 s.f.: 26

iii. 3 s.f.: 25.5

b) 321.0990

i. 3 s.f.: 321

ii. 4 s.f.: 321.1

iii. 5 s.f.: 321.10

c) 0.002999

i. 1 s.f.: 0.003

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

c) 0.002999

- i. 1 s.f.: 0.003
- ii. 2 s.f.:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

c) 0.002999

- i. 1 s.f.: 0.003
- ii. 2 s.f.: 0.0030



# Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

c) 0.002999

- i. 1 s.f.: 0.003
- ii. 2 s.f.: 0.0030
- iii. 3 s.f.:

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

c) 0.002999

- i. 1 s.f.: 0.003
- ii. 2 s.f.: 0.0030
- iii. 3 s.f.: 0.00300

## Rounding - significant figures - exercises

Round the given given number accordingly:

a) 25.519

- i. 1 s.f.: 30
- ii. 2 s.f.: 26
- iii. 3 s.f.: 25.5

b) 321.0990

- i. 3 s.f.: 321
- ii. 4 s.f.: 321.1
- iii. 5 s.f.: 321.10

c) 0.002999

- i. 1 s.f.: 0.003
- ii. 2 s.f.: 0.0030
- iii. 3 s.f.: 0.00300

## Rounding - significant figures

Again we need to remember that there is a difference between the answer 300 correct to 1 s.f. and 300 correct to 2 s.f. etc.

## Rounding - significant figures

Again we need to remember that there is a difference between the answer 300 correct to 1 s.f. and 300 correct to 2 s.f. etc.

If the answer given is 300 correct to 1 s.f., then the actual answer could have been any number between 250 and 350,

## Rounding - significant figures

Again we need to remember that there is a difference between the answer 300 correct to 1 s.f. and 300 correct to 2 s.f. etc.

If the answer given is 300 correct to 1 s.f., then the actual answer could have been any number between 250 and 350, and if the answer given is 300 correct to 2 s.f., then the actual answer could have been any number between 295 and 305.

## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

Consider the following list of numbers:

12112,      0.453,      9,       $0.56 \times 10^3$ ,       $353 \times 10^{-5}$



## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

Consider the following list of numbers:

12112,      0.453,      9,       $0.56 \times 10^3$ ,       $353 \times 10^{-5}$

How many of these numbers are written in standard form?

## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

Consider the following list of numbers:

12112,      0.453,      9,       $0.56 \times 10^3$ ,       $353 \times 10^{-5}$

How many of these numbers are written in standard form? None.

## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

Consider the following list of numbers:

12112,      0.453,      9,       $0.56 \times 10^3$ ,       $353 \times 10^{-5}$

How many of these numbers are written in standard form? None. The first three are missing the  $10^k$  part, for the last two  $a$  is not between 1 and 10.

## Standard form

A number is written in a standard form if it's in the form  $a \times 10^k$ , where  $1 \leq a < 10$  and  $k \in \mathbb{Z}$

Consider the following list of numbers:

$$12112, \quad 0.453, \quad 9, \quad 0.56 \times 10^3, \quad 353 \times 10^{-5}$$

How many of these numbers are written in standard form? None. The first three are missing the  $10^k$  part, for the last two  $a$  is not between 1 and 10. We can turn them all into the standard form:

$$1.2112 \times 10^4, \quad 4.53 \times 10^{-1}, \quad 9 \times 10^0, \quad 5.6 \times 10^2, \quad 3.53 \times 10^{-3}$$

# Standard form

Write the following numbers in the standard form:

123

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

20030

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$



# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

0.4561

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

2

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

$$0.000023$$

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

$$0.000023 = 2.3 \times 10^{-5},$$

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

$$0.000023 = 2.3 \times 10^{-5},$$

10

# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

$$0.000023 = 2.3 \times 10^{-5},$$

$$10 = 1 \times 10^1,$$



# Standard form

Write the following numbers in the standard form:

$$123 = 1.23 \times 10^2,$$

$$20030 = 2.003 \times 10^4,$$

$$0.4561 = 4.561 \times 10^{-1},$$

$$2 = 2 \times 10^0,$$

$$0.000023 = 2.3 \times 10^{-5},$$

$$10 = 1 \times 10^1,$$

You should also cover the other presentation that deals with approximations and errors.

If you have any questions or doubts email me at [T.J.Lechowski@gmail.com](mailto:T.J.Lechowski@gmail.com)