**Determine the number of Significant Figures**

1. 540
2. 96.20
3. 200
4. 0.005
5. 2.900 x 10-9
6. 4500
7. 800.00
8. 90.02
9. 100.1
10. 0.7

**Calculate using the correct number of Significant Figures**

1. 22.5285 + 22.14 + 4.266
2. 16.221 - 8.28
3. 48.835 - 9.1 - 2.48
4. 6.2 + 4.114 + 12.32
5. 88.489 + 7.133 + 6.5
6. 3.68 ÷ 0.07925
7. 32.27 x 1.54
8. 1.750 x 0.0342
9. 45.2 ÷ 6.3578
10. 0.00032 ÷ 11.2

**Answer Key:**

**Determine the number of Significant Figures**

1. 540

Rule: Zeros in a Large Number without a Decimal are **not** significant.

Answer: 2 sig figs

1. 96.20

Rule: Zeros after the decimal **are** significant.

Answer: 4 sig figs

1. 200

Rule: Zeros in a Large Number without a Decimal are **not** significant.

Answer: 1 sig fig

1. 0.005

Rule: Leading/Beginning Zeros are **not** significant.

Answer: 1 sig fig

1. 2.900 x 10-9

Rule: Zeros and Coefficients in Scientific Notation **are** Significant.

Answer: 4 sig figs

1. 4500

Rule: Zeros in a Large Number without a Decimal are **not** significant.

Answer: 2 sig figs

1. 800.00

Rule: Zeros after the decimal **are** significant.

Answer: 5 sig figs

1. 90.02

Rule: Zeros in the middle of nonzero numbers **are** significant.

Answer: 4 sig figs

1. 100.1

Rule: Zeros in the middle of nonzero numbers **are** significant.

Answer: 4 sig figs

1. 0.7

Rule: Leading/Beginning Zeros are **not** significant.

Answer: 1 sig fig

**Calculate using the correct number of Significant Figures**

1. 22.5285 + 22.14 + 4.266

Step 1: Line up Decimal places

22.5285 (4 decimal places)

22.14 (2 decimal places) **Least Number of Decimal Places**

4.266 (3 decimal places)

Step 2: Add together and Round to the least number of decimal places

48.9345

Round to 2 decimal places

Answer: 48.93 4 sig figs

1. 16.221-8.28

Step 1: Line up Decimal places

16.221 (3 decimal places)

8.28 (2 decimal places) **Least Number of Decimal Places**

Step 2: Subtract and round to least number of decimal places

7.941

Round to 2 decimal places

Answer: 7.94 3 sig figs

1. 48.835-9.1-2.48

Step 1: Line up Decimal places

48.835 (3 decimal places)

 9.1 (1 decimal place) **Least Number of Decimal Places**

 2.48 (2 decimal places)

Step 2: Subtract and round to least number of decimal places

37.255

Round up to 1 decimal place

Answer: 37.3

1. 6.2 + 4.114 + 12.32

Step 1: Line up Decimal places

12.32 (2 decimal places)

 4.114 (3 decimal places)

 6.2 (1 decimal place) **Least Number of Decimal Places**

Step 2: Add and round to least number of decimal places

22.634

Round to one decimal place

Answer: 22.6

1. 88.489 + 7.133 + 6.5

Step 1: Line up Decimal places

88.489 (3 decimal places)

 7.133 (3 decimal places)

 6.5 (1 decimal place) **Least Number of Decimal Places**

Step 2: Add and round to least number of decimal places

102.122

Round to 1 decimal place

Answer: 102.1

1. 3.68 ÷ 0.07925

Step 1: Determine Number of sig figs for each number

 3.68 0.07925

 3 sig figs 4 sig figs

 (Lowest)

Step 2: Divide

46.43533123

Step 3: Round to the least number of sig figs

46.4

Answer: 46.4

1. 32.27 x 1.54

Step 1: Determine Number of sig figs for each number

 32.27 1.54

 4 sig figs 3 sig figs

 (Lowest)

Step 2: Multiply

49.6958

Step 3: Round up to the least number of sig figs

Answer: 49.7

1. 1.750 x 0.0342

Step 1: Determine Number of sig figs for each number

 1.750 0.0342

 4 sig figs 3 sig figs

 (Lowest)

Step 2: Multiply

0.05985

Step 3: Round to the least number of sig figs

Answer: 0.0599

1. 45.2 ÷ 6.3578

Step 1: Determine Number of sig figs for each number

 45.2 6.3578

 3 sig figs 5 sig figs

 (Lowest)

Step 2: Divide

7.109377458

Step 3: Round up to the least number of sig figs

Answer: 7.11

1. 0.00032 ÷ 11.2

Step 1: Determine Number of sig figs for each number

 0.0032 11.2

 2 sig figs 3 sig figs

 (Lowest)

Step 2: Divide

0.00028571

Step 3: Round to the least number of sig figs

Answer: 0.00028

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