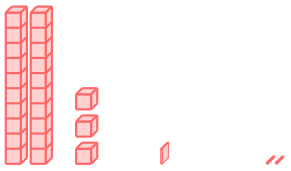
DECIMAL NUMBERS

A WHAT ARE DECIMALS?

A.1 IDENTIFYING PLACE VALUES

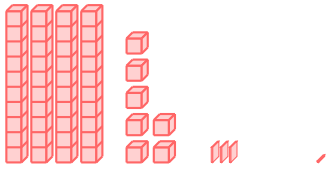
Ex 1:



The number of cubes is:

Tens	Ones	.	Tenths	Hundredths
		.		

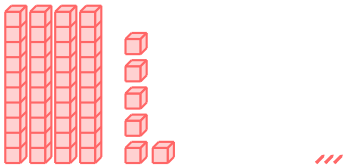
Ex 2:



The number of cubes is

Tens	Ones	.	Tenths	Hundredths
		.		

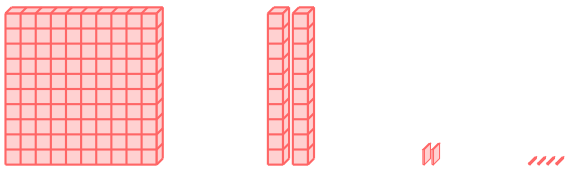
Ex 3:



The number of cubes is

Tens	Ones	.	Tenths	Hundredths
		.		

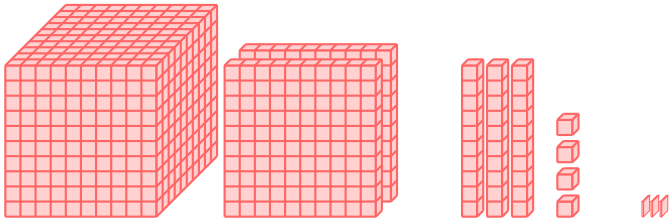
Ex 4:



The number of cubes is

Hundreds	Tens	Ones	.	Tenths	Hundredths
			.		

Ex 5:



The number of cubes is

Thousands	Hundreds	Tens	Ones	.	Tenths
				.	

A.2 WRITING DECIMAL NUMBERS

Ex 6:

Tens	Ones	.	Tenths	Hundredths
2	3	.	1	2

The decimal number is $\square$.

Ex 7:

Tens	Ones	.	Tenths	Hundredths
2	0	.	0	1

The decimal number is $\square$.

Ex 8:

Hundreds	Tens	Ones	.	Tenths	Hundredths
1	2	0	.	9	9

The decimal number is $\square$.

Ex 9:

Tens	Ones	.	Tenths	Hundredths
2	3	.	1	0

The decimal number is $\square$.

Ex 10:

Hundreds	Tens	Ones	.	Tenths	Hundredths
9	1	1	.	0	1

The decimal number is $\square$.

A.3 FINDING THE DIGIT IN A PLACE VALUE

Ex 11: The digit in the hundredths place of 43.21 is $\square$.

Ex 12: The digit in the tens place of 900.01 is $\square$.

Ex 13: The digit in the tenths place of 10.04 is $\square$.

Ex 14: The digit in the hundredths place of 0.89 is $\square$.

A.4 WRITING DECIMAL NUMBERS FROM FRACTIONS IN BASE 10

Ex 15: Write in decimal form:

$$\frac{3}{10} = \square$$

Ex 16: Write in decimal form:

$$\frac{3}{100} = \square$$

Ex 17: Write in decimal form:

$$\frac{5}{100} = \square$$

Ex 18: Write in decimal form:

$$\frac{8}{10} = \square$$

A.5 WRITING DECIMAL NUMBERS FROM EXPANDED FORMS

Ex 19: 4 tens + 1 one + 2 tenths + 5 hundredths = ☐

Ex 20: 2 tens + 3 ones + 5 tenths + 1 hundredth = ☐

Ex 21: 2 tens + 5 hundredths = ☐

Ex 22: 1 hundredth = ☐

A.6 WRITING DECIMAL NUMBERS FROM EXPANDED FORMS II

Ex 23:

$$2 + 4 \times \frac{1}{10} + 1 \times \frac{1}{100} = \square$$

Ex 24:

$$3 \times 10 + 1 + 2 \times \frac{1}{10} + 3 \times \frac{1}{100} = \square$$

Ex 25:

$$1 + 3 \times \frac{1}{100} = \square$$

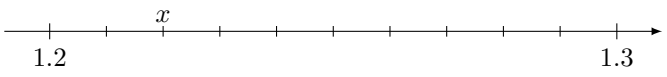
Ex 26:

$$9 + 9 \times \frac{1}{10} + 9 \times \frac{1}{100} = \square$$

B DECIMALS ON A NUMBER LINE

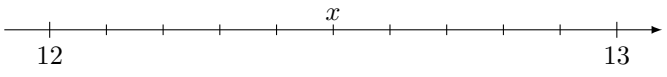
B.1 IDENTIFYING DECIMAL NUMBERS ON A NUMBER LINE

Ex 27: Find the value of x



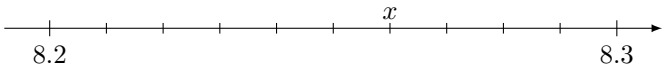
$x =$ ☐

Ex 28: Find the value of x



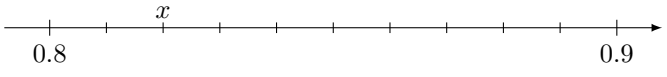
$x =$ ☐

Ex 29: Find the value of x



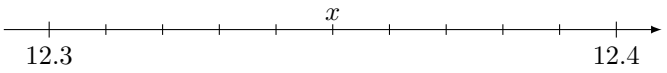
$x =$ ☐

Ex 30: Find the value of x



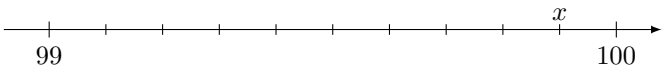
$x =$ ☐

Ex 31: Find the value of x



$x =$ ☐

Ex 32: Find the value of x



$x =$ ☐

C ORDERING DECIMALS

C.1 COMPARING NUMBERS

Ex 33:

$$6.22 \ \square \begin{matrix} < \\ > \\ = \end{matrix} \ 6.3$$

Ex 34:

$$12.8 \ \square \begin{matrix} < \\ > \\ = \end{matrix} \ 11.9$$

Ex 35:

$$9.08 \ \square \begin{matrix} < \\ > \\ = \end{matrix} \ 9.09$$

Ex 36:

$$120.8 \ \square \begin{matrix} < \\ > \\ = \end{matrix} \ 99.9$$

C.2 COMPARING NUMBERS IN REAL-WORLD PROBLEMS

MCQ 37: Shana threw a shot put 5 times. The distances thrown were:

$$4.11 \text{ m}, 4.08 \text{ m}, 4.1 \text{ m}, 4.01 \text{ m}$$

Order these distances from shortest to longest.

☐ $4.1 \text{ m} < 4.08 \text{ m} < 4.01 \text{ m} < 4.11 \text{ m}$

☐ $4.01 \text{ m} < 4.08 \text{ m} < 4.1 \text{ m} < 4.11 \text{ m}$

☐ $4.11 \text{ m} > 4.1 \text{ m} > 4.08 \text{ m} > 4.01 \text{ m}$

☐ $4.01 \text{ m} < 4.08 \text{ m} < 4.11 \text{ m} < 4.1 \text{ m}$

MCQ 38: Alex received the following marks in five different subjects:

$$12.5, 13.75, 12.25, 13.5, 14$$

Order these marks from lowest to highest.

☐ $12.5 < 13.5 < 13.75 < 14 < 12.25$

☐ $13.75 < 13.5 < 12.5 < 12.25 < 14$

☐ $12.25 < 12.5 < 13.5 < 13.75 < 14$

☐ $12.25 < 12.5 < 13.75 < 13.5 < 14$

MCQ 39: In a baking competition, the judges scored five cakes based on presentation, flavor, and creativity. The scores were:

$$8.7, 9.2, 8.5, 9.0, 8.8$$

Order these scores from highest to lowest.

☐ $9.2 > 9.0 > 8.8 > 8.7 > 8.5$

☐ $8.5 > 8.7 > 8.8 > 9.0 > 9.2$

☐ $8.7 > 8.5 > 9.0 > 8.8 > 9.2$

☐ $9.0 > 9.2 > 8.5 > 8.7 > 8.8$

D ROUNDING DECIMALS

D.1 ROUNDING TO THE NEAREST TENTH

Ex 40: Round to the nearest tenth:

$12.346 \approx$ ☐

Ex 41: Round to the nearest tenth:

$5.67 \approx$ ☐

Ex 42: Round to the nearest tenth:

$0.891 \approx$ ☐

Ex 43: Round to the nearest tenth:

$0.95 \approx$ ☐

D.2 ROUNDING TO THE NEAREST HUNDREDTH

Ex 44: Round to the nearest hundredth:

$12.346 \approx$ ☐

Ex 45: Round to the nearest hundredth:

$0.99199 \approx$ ☐

Ex 46: Round to the nearest hundredth:

$0.397 \approx$ ☐

Ex 47: Round to the nearest hundredth:

$122.3421 \approx$ ☐

E MULTIPLYING BY POWERS OF 10

E.1 MULTIPLYING BY 10

Ex 48: Calculate $10 \times 5.24 =$ ☐

Ex 49: Calculate $10 \times 10.37 =$ ☐

Ex 50: Calculate $10 \times 0.134 =$ ☐

Ex 51: Calculate $10 \times 20.3 =$ ☐

E.2 MULTIPLYING BY 100

Ex 52: Calculate $100 \times 3.561 =$ ☐

Ex 53: Calculate $100 \times 0.03 =$ ☐

Ex 54: Calculate $100 \times 10.105 =$ ☐

Ex 55: Calculate $100 \times 2.3 =$ ☐

F DIVIDING BY POWERS OF 10

F.1 DIVIDING BY 10

Ex 56: Calculate $23.2 \div 10 =$ ☐

Ex 57: Calculate $120.3 \div 10 =$ ☐

Ex 58: Calculate $\frac{12.1}{10} =$ ☐

Ex 59: Calculate $\frac{0.12}{10} =$ ☐

F.2 DIVIDING BY 100

Ex 60: Calculate $23.2 \div 100 =$ ☐

Ex 61: Calculate $12 \div 100 =$ ☐

Ex 62: Calculate $\frac{12.1}{100} =$ ☐

Ex 63: Calculate $\frac{240.1}{100} =$ ☐

F.3 CONVERTING DECIMAL FRACTIONS TO DECIMALS

Ex 64:

$$\frac{53}{10} = \square$$

Ex 65:

$$\frac{231}{10} = \square$$

Ex 66:

$$\frac{173}{100} = \square$$

Ex 67:

$$\frac{2400}{100} = \square$$

F.4 CONVERTING DECIMALS TO DECIMAL FRACTIONS

Ex 68:

$$5.3 = \frac{\square}{\square}$$

Ex 69:

$$49.4 = \frac{\square}{\square}$$

Ex 70:

$$20.8 = \frac{\square}{\square}$$

Ex 71:

$$6.82 = \frac{\square}{\square}$$

Ex 72:

$$0.49 = \frac{\square}{\square}$$