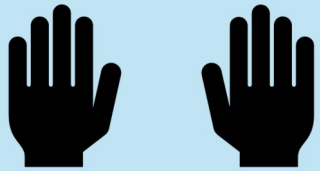
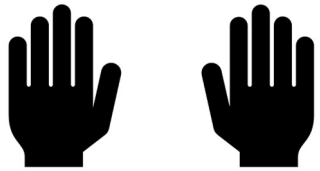
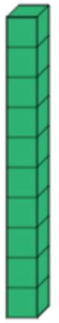
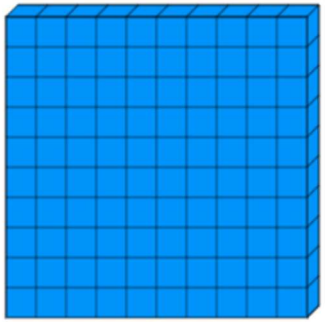
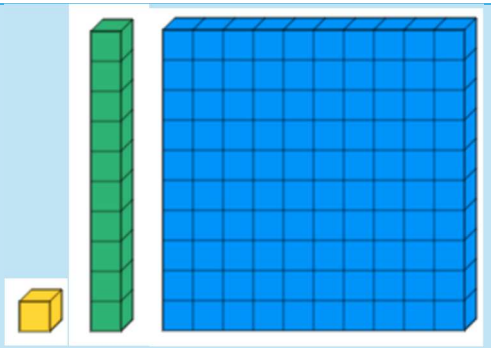
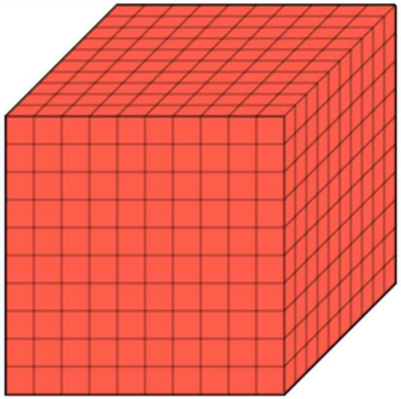
MATHEMATICAL VOCABULARY: PLACE VALUE

Word	What does it mean?	Example	Visual prompt
Base 10	Also known as the decimal system, base-10 is the number system we use every day. It is based on ten digits**:** 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9**.** Each digit's value depends on its place in a number, and positions are determined by powers of ten. Base 10 is widely used because it aligns with how we naturally count—likely influenced by having ten fingers.	For example, in the number 345: • 3 is in the hundreds place (3 × 100) • 4 is in the tens place (4 × 10) • 5 is in the ones place (5 × 1)	
Digit	Digits (0 – 9) are the individual symbols that make up numbers.	There are 10 digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 • In 347, the digits are 3, 4, and 7. • In 5,092, the digits are 5, 0, 9, and 2. • In 0.25, the digits are 0, 2, and 5.	

The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.

Place value	The value of a digit based on its position in a number.	In 352, the 5 represents 50.	
Units	The rightmost digit in a whole number that represents single values.	In 327, the 7 is in the units place and has a place value of seven ones or 7.	
Tens	The second rightmost digit in a whole number that represents tens values.	In 327, the 2 is in the tens place and has a place value of two tens or 20.	
Hundreds	The third rightmost digit in a whole number that represents hundred values.	In 327, the 3 is in the hundreds place and has a place value of three hundreds or 300.	

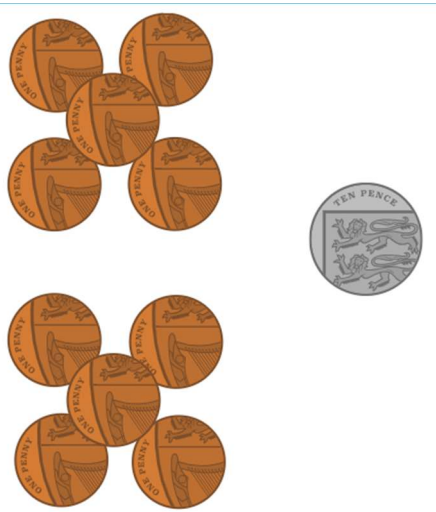
The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.

Power of ten	How numbers are structured in our base-10 system. Each place value is a power of ten, meaning: • Moving left increases the value by multiplying by 10 (e.g., ones → tens → hundreds). • Moving right decreases the value by dividing by 10 (e.g., ones → tenths → hundredths).	For example: • $10^1 = 10$ (tens place) • $10^2 = 100$ (hundreds place) • $10^3 = 1{,}000$ (thousands place) • $10^{-1} = 0.1$ (tenths place) • $10^{-2} = 0.01$ (hundredths place)	
Thousands, millions, billions	Larger place values that make up bigger numbers.	In 1,234,567,890, the 7 is in the thousands place and has a value of 7 thousands or 7000. The 4 is in the millions place and has a value of 4 millions or 4,000,000. The 1 is in the billions place and has a value of 1 billion or 1,000,000,000.	
Decimal point	A dot separating whole numbers from fractions	For example, in 3.5 the dot separates 3 which is a whole number from 5, which is a fraction (5 tenths or 0.5).	

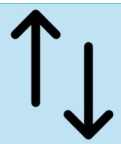
The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.

Tenths	Tenths refer to dividing something into ten equal parts. A tenth is represented as the fraction 1/10 or the decimal 0.1. It is the first place to the right of the decimal point in a number.	For example, in 0.**7**, the digit 7 is in the tenths place, meaning seven-tenths.	
Hundredths	Hundredths refer to dividing something into 100 equal parts. A hundredth is represented as the fraction 1/100 or the decimal 0.01. It is the second place to the right of the decimal point in a number.	For example, in 0.0**7**, the digit 7 is in the hundredths place, meaning seven-hundredths.	
Expanded form	Writing a number by showing the value of each digit separately	For example, 352 = 300 + 50 + 2.	⟷
Place value chart	A visual tool that organises digits into columns for easy understanding.		

The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.

Exchange	Trading up between different place value columns in a number system. This process is often called regrouping or carrying in addition.	For example: • 10 ones can be exchanged for 1 ten. • 10 tens can be exchanged for 1 hundred. • 10 hundreds can be exchanged for 1 thousand.	
Decomposition	Trading down between different place value columns in a number system. This process is often called borrowing in subtraction.	For example: • 1 ten can be broken down into 10 ones. • 1 hundred can be broken down into 10 tens. • 1 thousand can be broken down into 10 hundreds.	
Place value holder	Zeros help keep digits in the correct place.	For example, 205 vs. 25.	

The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.

Ordering numbers	Arranging numbers in order of size (smallest to largest, or largest to smallest) using their place value.	For example, 123, 1023, 10230 and 100203 are in order of increasing size.	
Comparing numbers	Comparing the value of numbers according to their place value and saying if they are bigger, smaller or equal.	For example, 325 is larger than 305.	
Rounding	Adjusting a number to a simpler form based on place value	For example, rounding 347 to the nearest ten is 350.	

The images were created using free virtual manipulatives available at MathsBot.com and Polypad, by Amplify.