In the table below,

E represents an Object type, e.g. String
K represents an Object type used as the key
V represents an Object type used as the value
e represents a variable of E type, e.g. str
k represents a variable of K type
v represents a variable of V type

Comparing Collections and Arrays:

	ArrayList<E> §4.2 on p 130	HashMap<K,V> §6.6 on p 219	HashSet<E> §6.7 on p 223	array: E[ ] §7.2 on p 252
Aspect:				
Single element or pair	Single	key, value pair	Single	Single
Variable or fixed length	Variable	Variable	Variable	Fixed
Ordered?	Indexed	N	N	indexed
Allows duplicates?	Y	N of key, Y of value	N	Y
Object vs primitive types	Object	Object	Object	either
iterator() ?	Y	N	Y	N
Common methods	void add(E e) int size() E get(int index) void remove(index)	void put(K k, V v) V get(K k)	void add(E e) boolean contains(E e)	None: access is via ArrayName[index]
Notes	Use Iterator to safely remove in loop	keySet() will return Set of keys in HashMap<>		• After creation, elements are null or 0 • Arrays have gaps • Length is in field .length • Substantially faster than ArrayList insertion