

```

def partition(data, pivot):
    ... less = [x for x in data if x < pivot]
    ... equal = [x for x in data if x == pivot]
    ... greater = [x for x in data if x > pivot]
    ... return [less, equal, greater]

def merge(sorted_parts):
    ... return sum(sorted_parts, [])

if __name__ == '__main__':
    ... data_sizes = [100000, 500000, 1000000, 5000000, 10000000, 50000000, 100000000]
    ... times_parallel = []

    ... for size in data_sizes:
    ...     ... data = np.random.randint(1, 1000000, size)
    ...     ... start_time = time.time()
    ...     ... sorted_data = parallel_sort(data)
    ...     ... end_time = time.time()
    ...     ... times_parallel.append(end_time - start_time)

    ... plt.plot(data_sizes, times_parallel, marker='o')
    ... plt.xlabel('Data Size')
    ... plt.ylabel('Time (s)')
    ... plt.title('Parallel Quicksort Performance')
    ... plt.grid(True)
    ... plt.show()

```

✓ 4m 21.3s

