

Question 1: Convert 5746_8 to decimal number

Solution:

The given number is 5746_8

$$5746_8 = (5 * 8^3) + (7 * 8^2) + (4 * 8^1) + (6 * 8^0)$$

$$= 5 * 512 + 7 * 64 + 4 * 8 + 6 * 1$$

$$= 2560 + 448 + 32 + 6$$

$$= 3046$$

The equivalent decimal number for 5746_8 is 3046

Answer: $5746_8 = 3046$

Question 2: Convert 201_8 to decimal number

Solution:

The given number is 201_8

$$201_8 = (2 * 8^2) + (0 * 8^1) + (1 * 8^0)$$

$$= 2 * 64 + 0 * 8 + 1 * 1$$

$$= 128 + 0 + 1$$

$$= 129$$

The equivalent decimal number for 201_8 is 129

Answer: $201_8 = 129$

Question 3: Convert 54_8 to decimal number

Solution:

The given number is 54_8

$$54_8 = (5 * 8^1) + (4 * 8^0)$$

$$= 5 * 8 + 4 * 1$$

$$= 40 + 4$$

$$= 44$$

The equivalent decimal number for 54_8 is 44

Answer: $54_8 = 44$

Question 4: Convert 6.1_8 to decimal number

Solution:

The given number is 6.1_8

$$6.1_8 = (6 * 8^0) + (1 * \frac{1}{8})$$

$$= 6 * 1 + \frac{1}{8}$$

$$= 6 + \frac{1}{8}$$

$$= 6 + 0.125$$

$$= 6.125$$

The equivalent decimal number for 6.1_8 is 6.125

Answer: $6.1_8 = 6.125$

Question 5: Convert 10_8 to decimal number

Solution:

The given number is 10_8

$$10_8 = (1 * 8^1) + (0 * 8^0)$$

$$= 1 * 8 + 0 * 1$$

$$= 8 + 0$$

$$= 8$$

The equivalent decimal number for 10_8 is 8

Answer: $10_8 = 8_{10}$