

**Logarithmic Expression**

Sheet 1

For the given values, express each expression in terms of  $x$ ,  $y$ ,  $z$ .

$$x = \log 2, \quad y = \log 8, \quad z = \log 12$$

1)  $\log 200$

Answer

2)  $\log 40$

Answer

3)  $\log 32$

Answer

4)  $\log 120$

Answer

For the given values, express each expression in terms of  $a$ ,  $b$ ,  $c$ .

$$a = \log 6, \quad b = \log 15, \quad c = \log 3$$

5)  $\log 135$

Answer

6)  $\log 5$

Answer

7)  $\log 20$

Answer

8)  $\log 90$

Answer

**Answer key****Logarithmic Expression**

Sheet 1

For the given values, express each expression in terms of  $x$ ,  $y$ ,  $z$ .

$$x = \log 2, \quad y = \log 8, \quad z = \log 12$$

1)  $\log 200$

Answer

$2x + 2$

2)  $\log 40$

Answer

$2x + 1$

3)  $\log 32$

Answer

$2x + y$

4)  $\log 120$

Answer

$z + 1$

For the given values, express each expression in terms of  $a$ ,  $b$ ,  $c$ .

$$a = \log 6, \quad b = \log 15, \quad c = \log 3$$

5)  $\log 135$

Answer

$2c + b$

6)  $\log 5$

Answer

$b - c$

7)  $\log 20$

Answer

$a - c + 1$

8)  $\log 90$

Answer

$2c + 1$