



CAMI Mathematics: Grade 12

12.1 Logarithmic function

12.1 Definition of a logarithm

1. Write the following in the logarithmic or exponential form.

(a) $3^3 = 27$

(b) $9^2 = 81$

(c) $9^3 = 729$

(d) $7^3 = 343$

(e) $\log_3 9 = 2$

(f) $3 = \log_9 729$

(g) $2^5 = 32$

(h) $\log_8 \frac{1}{64} = -2$

(i) $6^{-2} = \frac{1}{36}$

(j) $3^{-4} = \frac{1}{81}$

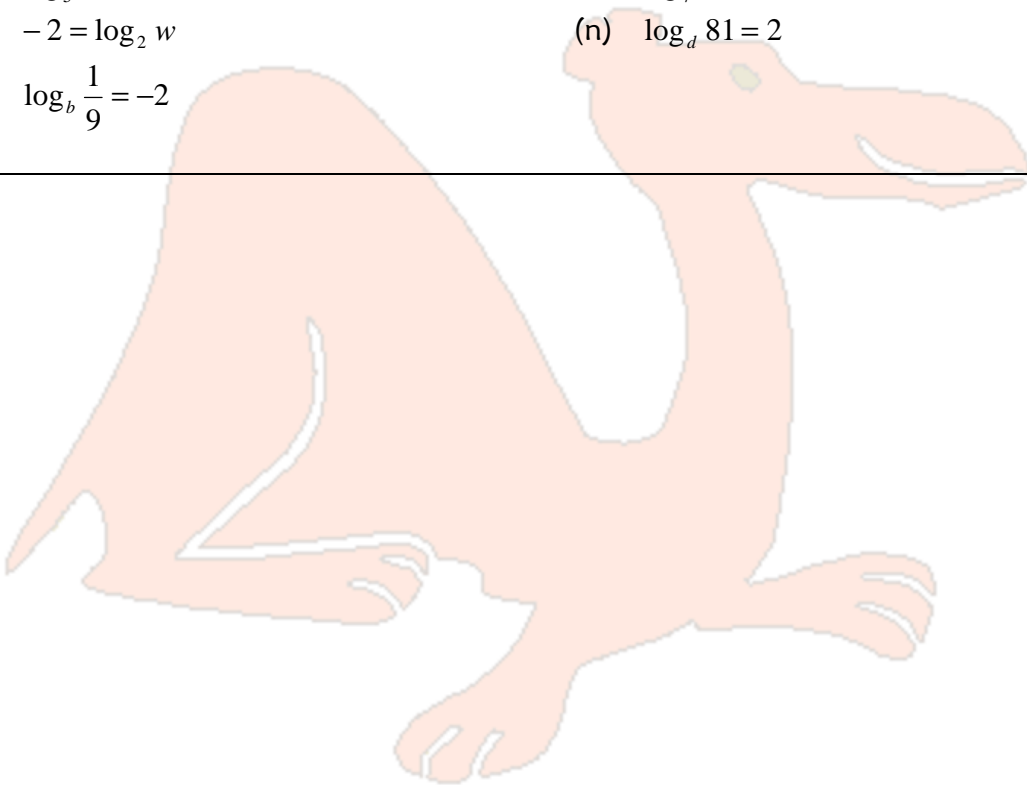
(k) $\log_5 125 = v$

(l) $\log_7 h = 2$

(m) $-2 = \log_2 w$

(n) $\log_d 81 = 2$

(o) $\log_b \frac{1}{9} = -2$





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MEMO

1. Write the following in the logarithmic or exponential form.
[5.5.1.1; 5.5.1.2; 5.5.1.3]

(a) $3^3 = 27$
 $\log_3 27 = 3$

(b) $9^2 = 81$
 $\log_9 81 = 2$

(c) $9^3 = 729$
 $\log_9 729 = 3$

(d) $7^3 = 343$
 $\log_7 343 = 3$

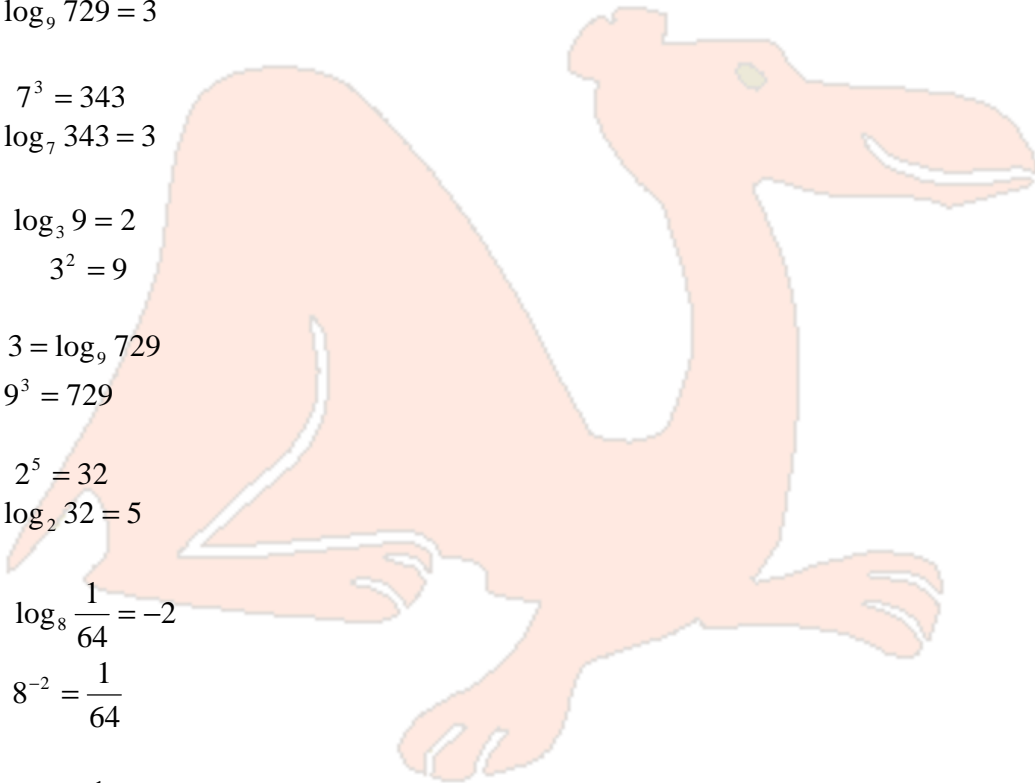
(e) $\log_3 9 = 2$
 $3^2 = 9$

(f) $3 = \log_9 729$
 $9^3 = 729$

(g) $2^5 = 32$
 $\log_2 32 = 5$

(h) $\log_8 \frac{1}{64} = -2$
 $8^{-2} = \frac{1}{64}$

(i) $6^{-2} = \frac{1}{36}$
 $\log_6 \frac{1}{36} = -2$





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(j) $3^{-4} = \frac{1}{81}$

$$\log_3 \frac{1}{81} = -4$$

(k) $\log_5 125 = v$

$$5^v = 125$$

(l) $\log_7 h = 2$

$$7^2 = h$$

(m) $-2 = \log_2 w$

$$2^{-2} = w$$

(n) $\log_d 81 = 2$

$$d^2 = 81$$

(o) $\log_b \frac{1}{9} = -2$

$$b^{-2} = \frac{1}{9}$$

