Calculus ex01   **10, Apr, 2019**

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$\longleftarrow$ Please encode your student number, and write your first and last names below.

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 6^4.

$\bigcirc$ 7776 $\bigcirc$ 1297 $\bigcirc$ 1295 $\bigcirc$ 216 $\bigcirc$ 1296

Question 2   Evaluate 3^{-1}.

$\bigcirc$ $\sqrt{3}$ $\bigcirc$ $\frac{1}{3}$ $\bigcirc$ -4 $\bigcirc$ -3 $\bigcirc$ $\frac{1}{4}$

Question 3   Evaluate $8^{\frac{1}{2}}$.

$\bigcirc$ $2\sqrt{2}$ $\bigcirc$ -8 $\bigcirc$ $\pm 2\sqrt{2}$ $\bigcirc$ $\frac{1}{8}$ $\bigcirc$ 64

Question 4 ♣   Evaluate $\left(\frac{1}{5}\right)^{-2}$.

$\bigcirc$ $\left(\frac{1}{5^2}\right)^{-1}$ $\bigcirc$ 5^2 $\bigcirc$ $\left(5^2\right)^{-1}$ $\bigcirc$ $\sqrt[2]{5}$ $\bigcirc$ $\frac{1}{5^2}$
$\bigcirc$ *None of these answers are correct.*

Question 5   Evaluate $2^9 \times 2^7$.

$\bigcirc$ 2^3 $\bigcirc$ 2^{16} $\bigcirc$ 2^{63} $\bigcirc$ 2^{62} $\bigcirc$ 2^{17}

Question 6   Solve the equation $\log_x 36 = 2$.

$\bigcirc$ 12 $\bigcirc$ 8 $\bigcirc$ 2 $\bigcirc$ 6 $\bigcirc$ 3

Question 7   Solve the equation $\log_6 x = 3$.

$\bigcirc$ 5^3 $\bigcirc$ 6^3 $\bigcirc$ 6^4 $\bigcirc$ 5^4 $\bigcirc$ 6^2

Question 8   Solve the equation $\log_2(3-x) = 4\log_{16}(x+1)$.

$\bigcirc$ 0 $\bigcirc$ 2 $\bigcirc$ -2 $\bigcirc$ -1 $\bigcirc$ 1

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○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4   ⟵ Please encode your student number, and
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5   write your first and last names below.
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○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7   ┌─────────────────────────────────┐
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8   │ First name and last name:....... .... │
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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 5^4.

○ 624   ○ 626   ○ 3125   ○ 625   ○ 125

Question 2   Evaluate 2^{-1}.

○ -3 ○ $\sqrt{2}$ ○ $\frac{1}{2}$ ○ -2 ○ $\frac{1}{3}$

Question 3   Evaluate $5^{\frac{1}{2}}$.

○ $\frac{1}{5}$ ○ $\sqrt{5}$ ○ $\pm\sqrt{5}$ ○ 25 ○ -5

Question 4 ♣   Evaluate $\left(\frac{1}{7}\right)^{-4}$.

○ $\sqrt[4]{7}$ ○ $\left(\frac{1}{7^4}\right)^{-1}$ ○ $\frac{1}{7^4}$ ○ $\left(7^4\right)^{-1}$ ○ 7^4
○ *None of these answers are correct.*

Question 5   Evaluate $2^8 \times 2^6$.

○ 2^{14} ○ 2^{47} ○ 2^{15} ○ 2^3 ○ 2^{48}

Question 6   Solve the equation $\log_x 216 = 3$.

○ 6   ○ 18   ○ 4   ○ 9   ○ 3

Question 7   Solve the equation $\log_6 x = -3$.

○ 6^{-2} ○ 5^{-2} ○ 6^{-4} ○ 5^{-3} ○ 6^{-3}

Question 8   Solve the equation $\log_5(5 - x) = 2\log_{25}(x + 1)$.

○ 0   ○ 4   ○ 3   ○ 1   ○ 2

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$\bigcirc 5 \ \bigcirc 5 \ \bigcirc 5 \ \bigcirc 5 \ \bigcirc 5 \ \bigcirc 5 \ \bigcirc 5 \ \bigcirc 5$ write your first and last names below.
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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 7^4.

$\bigcirc$ 16807 $\bigcirc$ 2400 $\bigcirc$ 343 $\bigcirc$ 2402 $\bigcirc$ 2401

Question 2   Evaluate 8^{-1}.

$\bigcirc$ -9 $\bigcirc$ $\frac{1}{9}$ $\bigcirc$ $\sqrt{8}$ $\bigcirc$ $\frac{1}{8}$ $\bigcirc$ -8

Question 3   Evaluate $2^{\frac{1}{2}}$.

$\bigcirc$ -2 $\bigcirc$ $\frac{1}{2}$ $\bigcirc$ 4 $\bigcirc$ $\pm\sqrt{2}$ $\bigcirc$ $\sqrt{2}$

Question 4 ♣   Evaluate $\left(\frac{1}{7}\right)^{-4}$.

$\bigcirc$ $\left(7^4\right)^{-1}$ $\bigcirc$ $\left(\frac{1}{7^4}\right)^{-1}$ $\bigcirc$ $\sqrt[4]{7}$ $\bigcirc$ $\frac{1}{7^4}$ $\bigcirc$ 7^4
$\bigcirc$ *None of these answers are correct.*

Question 5   Evaluate $2^8 \times 2^6$.

$\bigcirc$ 2^{47} $\bigcirc$ 2^{14} $\bigcirc$ 2^3 $\bigcirc$ 2^{15} $\bigcirc$ 2^{48}

Question 6   Solve the equation $\log_x 16 = 2$.

$\bigcirc$ 2 $\bigcirc$ 3 $\bigcirc$ 6 $\bigcirc$ 8 $\bigcirc$ 4

Question 7   Solve the equation $\log_4 x = -1$.

$\bigcirc$ 4^{-2} $\bigcirc$ 4^{-1} $\bigcirc$ 3^0 $\bigcirc$ 3^{-1} $\bigcirc$ 4^0

Question 8   Solve the equation $\log_3(2 - x) = 3\log_{27}(x + 5)$.

$\bigcirc$ -3.5 $\bigcirc$ -2.5 $\bigcirc$ -1.5 $\bigcirc$ -4.5 $\bigcirc$ -0.5

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○ 0 ○ 0 ○ 0 ○ 0 ○ 0 ○ 0 ○ 0 ○ 0
○ 1 ○ 1 ○ 1 ○ 1 ○ 1 ○ 1 ○ 1 ○ 1
○ 2 ○ 2 ○ 2 ○ 2 ○ 2 ○ 2 ○ 2 ○ 2
○ 3 ○ 3 ○ 3 ○ 3 ○ 3 ○ 3 ○ 3 ○ 3
○ 4 ○ 4 ○ 4 ○ 4 ○ 4 ○ 4 ○ 4 ○ 4
○ 5 ○ 5 ○ 5 ○ 5 ○ 5 ○ 5 ○ 5 ○ 5
○ 6 ○ 6 ○ 6 ○ 6 ○ 6 ○ 6 ○ 6 ○ 6
○ 7 ○ 7 ○ 7 ○ 7 ○ 7 ○ 7 ○ 7 ○ 7
○ 8 ○ 8 ○ 8 ○ 8 ○ 8 ○ 8 ○ 8 ○ 8
○ 9 ○ 9 ○ 9 ○ 9 ○ 9 ○ 9 ○ 9 ○ 9

⟵ Please encode your student number, and write your first and last names below.

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 7^4.

○ 343   ○ 16807   ○ 2401   ○ 2400   ○ 2402

Question 2   Evaluate 9^{-1}.

○ $\frac{1}{10}$ ○ -10 ○ -9 ○ $\sqrt{9}$ ○ $\frac{1}{9}$

Question 3   Evaluate $8^{\frac{1}{2}}$.

○ $\pm 2\sqrt{2}$ ○ $\frac{1}{8}$ ○ $2\sqrt{2}$ ○ 64 ○ -8

Question 4 ♣   Evaluate $\left(\frac{1}{2}\right)^{-4}$.

○ $\left(2^4\right)^{-1}$ ○ $\frac{1}{2^4}$ ○ 2^4 ○ $\left(\frac{1}{2^4}\right)^{-1}$ ○ $\sqrt[4]{2}$
○ *None of these answers are correct.*

Question 5   Evaluate $2^5 \times 2^8$.

○ 2^4 ○ 2^{40} ○ 2^{14} ○ 2^{39} ○ 2^{13}

Question 6   Solve the equation $\log_x 64 = 3$.

○ 12   ○ 4   ○ 4   ○ 3   ○ 7

Question 7   Solve the equation $\log_7 x = -2$.

○ 7^{-1} ○ 6^{-1} ○ 7^{-3} ○ 7^{-2} ○ 6^{-2}

Question 8   Solve the equation $\log_2(2 - x) = 2\log_4(x + 6)$.

○ -2 ○ -3 ○ 0 ○ -4 ○ -1

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○0 ○0 ○0 ○0 ○0 ○0 ○0 ○0
○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
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○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
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⟵ Please encode your student number, and write your first and last names below.

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 9^3.

○ 730   ○ 6561   ○ 81   ○ 729   ○ 728

Question 2   Evaluate 7^{-1}.

○ −8   ○ $\frac{1}{7}$ ○ $\sqrt{7}$ ○ −7   ○ $\frac{1}{8}$

Question 3   Evaluate $4^{\frac{1}{2}}$.

○ −4   ○ ±2   ○ $\frac{1}{4}$ ○ 16   ○ 2

Question 4 ♣   Evaluate $\left(\frac{1}{7}\right)^{-3}$.

○ 7^3 ○ $\left(\frac{1}{7^3}\right)^{-1}$ ○ $\left(7^3\right)^{-1}$ ○ $\sqrt[3]{7}$ ○ $\frac{1}{7^3}$
○ *None of these answers are correct.*

Question 5   Evaluate $2^7 \times 2^8$.

○ 2^{16} ○ 2^{56} ○ 2^{15} ○ 2^{55} ○ 2^2

Question 6   Solve the equation $\log_x 216 = 3$.

○ 3   ○ 18   ○ 4   ○ 9   ○ 6

Question 7   Solve the equation $\log_4 x = 3$.

○ 4^4 ○ 4^2 ○ 3^4 ○ 3^3 ○ 4^3

Question 8   Solve the equation $\log_4(5 - x) = 3\log_{64}(x + 7)$.

○ 1   ○ −2   ○ −1   ○ 2   ○ 0

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 6^4.

$\bigcirc$ 1296 $\bigcirc$ 1295 $\bigcirc$ 7776 $\bigcirc$ 1297 $\bigcirc$ 216

Question 2   Evaluate 7^{-1}.

$\bigcirc$ $\sqrt{7}$ $\bigcirc$ -7 $\bigcirc$ -8 $\bigcirc$ $\frac{1}{7}$ $\bigcirc$ $\frac{1}{8}$

Question 3   Evaluate $9^{\frac{1}{2}}$.

$\bigcirc$ ± 3 $\bigcirc$ -9 $\bigcirc$ 3 $\bigcirc$ $\frac{1}{9}$ $\bigcirc$ 81

Question 4 ♣   Evaluate $\left(\frac{1}{2}\right)^{-5}$.

$\bigcirc$ $\left(\frac{1}{2^5}\right)^{-1}$ $\bigcirc$ $\left(2^5\right)^{-1}$ $\bigcirc$ 2^5 $\bigcirc$ $\sqrt[5]{2}$ $\bigcirc$ $\frac{1}{2^5}$
$\bigcirc$ *None of these answers are correct.*

Question 5   Evaluate $2^7 \times 2^6$.

$\bigcirc$ 2^{13} $\bigcirc$ 2^2 $\bigcirc$ 2^{42} $\bigcirc$ 2^{41} $\bigcirc$ 2^{14}

Question 6   Solve the equation $\log_x 25 = 2$.

$\bigcirc$ 5 $\bigcirc$ 10 $\bigcirc$ 7 $\bigcirc$ 3 $\bigcirc$ 2

Question 7   Solve the equation $\log_6 x = 0$.

$\bigcirc$ 6^0 $\bigcirc$ 6^1 $\bigcirc$ 6^{-1} $\bigcirc$ 5^0 $\bigcirc$ 5^1

Question 8   Solve the equation $\log_3(7 - x) = 2\log_9(x + 1)$.

$\bigcirc$ 1 $\bigcirc$ 3 $\bigcirc$ 4 $\bigcirc$ 2 $\bigcirc$ 5

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○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4   ⟵ Please encode your student number, and
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5   write your first and last names below.
○6 ○6 ○6 ○6 ○6 ○6 ○6 ○6
○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7   First name and last name: . . . .
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8
○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 9^3.

○ 730   ○ 728   ○ 729   ○ 6561   ○ 81

Question 2   Evaluate 4^{-1}.

○ $\frac{1}{4}$ ○ $\frac{1}{5}$ ○ $\sqrt{4}$ ○ -4 ○ -5

Question 3   Evaluate $3^{\frac{1}{2}}$.

○ -3 ○ $\frac{1}{3}$ ○ 9   ○ $\pm\sqrt{3}$ ○ $\sqrt{3}$

Question 4 ♣   Evaluate $\left(\frac{1}{4}\right)^{-5}$.

○ 4^5 ○ $\frac{1}{4^5}$ ○ $\left(4^5\right)^{-1}$ ○ $\sqrt[5]{4}$ ○ $\left(\frac{1}{4^5}\right)^{-1}$
○ *None of these answers are correct.*

Question 5   Evaluate $2^9 \times 2^9$.

○ 2^{80} ○ 2^{19} ○ 2^1 ○ 2^{18} ○ 2^{81}

Question 6   Solve the equation $\log_x 125 = 3$.

○ 3   ○ 5   ○ 4   ○ 8   ○ 15

Question 7   Solve the equation $\log_7 x = -2$.

○ 7^{-1} ○ 6^{-2} ○ 7^{-3} ○ 6^{-1} ○ 7^{-2}

Question 8   Solve the equation $\log_3(2 - x) = 2\log_9(x + 2)$.

○ 2   ○ -1 ○ 0   ○ 1   ○ -2

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○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
○2 ○2 ○2 ○2 ○2 ○2 ○2 ○2
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⟵ Please encode your student number, and write your first and last names below.

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 8^3.

   ○ 511   ○ 4096   ○ 64   ○ 512   ○ 513

Question 2   Evaluate 2^{-1}.

   ○ $\frac{1}{3}$ ○ -3 ○ -2 ○ $\frac{1}{2}$ ○ $\sqrt{2}$

Question 3   Evaluate $6^{\frac{1}{2}}$.

   ○ -6 ○ $\sqrt{6}$ ○ $\frac{1}{6}$ ○ 36 ○ $\pm\sqrt{6}$

Question 4 ♣   Evaluate $\left(\frac{1}{6}\right)^{-4}$.

   ○ $\left(\frac{1}{6^4}\right)^{-1}$ ○ $\left(6^4\right)^{-1}$ ○ 6^4 ○ $\sqrt[4]{6}$ ○ $\frac{1}{6^4}$
   ○ *None of these answers are correct.*

Question 5   Evaluate $2^8 \times 2^5$.

   ○ 2^{40} ○ 2^{39} ○ 2^{14} ○ 2^4 ○ 2^{13}

Question 6   Solve the equation $\log_x 16 = 2$.

   ○ 4   ○ 6   ○ 2   ○ 8   ○ 3

Question 7   Solve the equation $\log_7 x = 0$.

   ○ 7^1 ○ 7^{-1} ○ 6^1 ○ 6^0 ○ 7^0

Question 8   Solve the equation $\log_4(9 - x) = 3\log_{64}(x + 3)$.

   ○ 6   ○ 5   ○ 2   ○ 3   ○ 4

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$\longleftarrow$ Please encode your student number, and write your first and last names below.

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Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 9^3.

$\bigcirc$ 729 $\bigcirc$ 6561 $\bigcirc$ 81 $\bigcirc$ 730 $\bigcirc$ 728

Question 2   Evaluate 5^{-1}.

$\bigcirc$ -6 $\bigcirc$ $\sqrt{5}$ $\bigcirc$ $\frac{1}{5}$ $\bigcirc$ $\frac{1}{6}$ $\bigcirc$ -5

Question 3   Evaluate $3^{\frac{1}{2}}$.

$\bigcirc$ $\sqrt{3}$ $\bigcirc$ $\frac{1}{3}$ $\bigcirc$ $\pm\sqrt{3}$ $\bigcirc$ 9 $\bigcirc$ -3

Question 4 ♣   Evaluate $\left(\frac{1}{8}\right)^{-3}$.

$\bigcirc$ $\frac{1}{8^3}$ $\bigcirc$ $\left(8^3\right)^{-1}$ $\bigcirc$ 8^3 $\bigcirc$ $\left(\frac{1}{8^3}\right)^{-1}$ $\bigcirc$ $\sqrt[3]{8}$
$\bigcirc$ *None of these answers are correct.*

Question 5   Evaluate $2^9 \times 2^6$.

$\bigcirc$ 2^{15} $\bigcirc$ 2^{16} $\bigcirc$ 2^4 $\bigcirc$ 2^{54} $\bigcirc$ 2^{53}

Question 6   Solve the equation $\log_x 125 = 3$.

$\bigcirc$ 4 $\bigcirc$ 15 $\bigcirc$ 8 $\bigcirc$ 5 $\bigcirc$ 3

Question 7   Solve the equation $\log_5 x = 2$.

$\bigcirc$ 4^2 $\bigcirc$ 5^1 $\bigcirc$ 5^2 $\bigcirc$ 4^3 $\bigcirc$ 5^3

Question 8   Solve the equation $\log_5(5 - x) = 4\log_{625}(x + 2)$.

$\bigcirc$ 1.5 $\bigcirc$ -1.5 $\bigcirc$ -0.5 $\bigcirc$ 2.5 $\bigcirc$ 0.5

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○1 ○1 ○1 ○1 ○1 ○1 ○1 ○1
○2 ○2 ○2 ○2 ○2 ○2 ○2 ○2
○3 ○3 ○3 ○3 ○3 ○3 ○3 ○3
○4 ○4 ○4 ○4 ○4 ○4 ○4 ○4
○5 ○5 ○5 ○5 ○5 ○5 ○5 ○5
○6 ○6 ○6 ○6 ○6 ○6 ○6 ○6
○7 ○7 ○7 ○7 ○7 ○7 ○7 ○7
○8 ○8 ○8 ○8 ○8 ○8 ○8 ○8
○9 ○9 ○9 ○9 ○9 ○9 ○9 ○9

⟵ Please encode your student number, and write your first and last names below.

First name and last name: ....

Questions with a ♣ may have zero, one or more right answers.

Question 1   Evaluate 5^4.

○ 125   ○ 624   ○ 626   ○ 3125   ○ 625

Question 2   Evaluate 8^{-1}.

○ −8   ○ $\frac{1}{8}$ ○ $\frac{1}{9}$ ○ −9   ○ $\sqrt{8}$

Question 3   Evaluate $7^{\frac{1}{2}}$.

○ $\sqrt{7}$ ○ $\frac{1}{7}$ ○ $\pm\sqrt{7}$ ○ −7   ○ 49

Question 4 ♣   Evaluate $\left(\frac{1}{8}\right)^{-4}$.

○ $\sqrt[4]{8}$ ○ $\left(\frac{1}{8^4}\right)^{-1}$ ○ $\left(8^4\right)^{-1}$ ○ 8^4 ○ $\frac{1}{8^4}$
○ *None of these answers are correct.*

Question 5   Evaluate $2^8 \times 2^9$.

○ 2^{18} ○ 2^{72} ○ 2^{71} ○ 2^2 ○ 2^{17}

Question 6   Solve the equation $\log_x 36 = 2$.

○ 2   ○ 8   ○ 12   ○ 6   ○ 3

Question 7   Solve the equation $\log_6 x = 0$.

○ 6^1 ○ 5^0 ○ 5^1 ○ 6^{-1} ○ 6^0

Question 8   Solve the equation $\log_2(2 - x) = 4\log_{16}(x + 1)$.

○ −2.5   ○ 1.5   ○ −1.5   ○ 0.5   ○ −0.5