

1. (1 point) set1/Gross\_1210\_summer200\_prob1.pg

Evaluate the expression  $\frac{4^2}{3^{-4}}$ .

Answer(s) submitted:

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(incorrect)

Correct Answers:

- 1296

2. (1 point) set1/Gross\_1210\_summer200\_prob2.pg

Evaluate the expression  $125^{-4/3}$ .

Answer(s) submitted:

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(incorrect)

Correct Answers:

- 0.0016

3. (1 point) set1/Gross\_1210\_summer200\_prob4.pg

The expression  $\left(\frac{x^3y^3z^3x^{-3}}{x^2y^3z^2y^4}\right)^{-4}$  equals  $x^r y^s z^t$

where  $r$ , the exponent of  $x$ , is: \_\_\_\_\_

and  $s$ , the exponent of  $y$ , is: \_\_\_\_\_

and finally  $t$ , the exponent of  $z$ , is: \_\_\_\_\_

[NOTE: Your answers can be algebraic expressions or fraction.]

Answer(s) submitted:

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•

•

(incorrect)

Correct Answers:

- 8
- 16
- -4

4. (1 point) set1/Gross\_1210\_summer200\_prob5.pg

Find the distance between (9, 9) and (-7, -2).

Answer(s) submitted:

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(incorrect)

Correct Answers:

- 19.4164878389476

5. (1 point) set1/Gross\_1210\_summer200\_prob6.pg

The equation of the line with slope 4 that goes through the point (8,7) can be written in the form  $y = mx + b$  where  $m$  is:

and where  $b$  is: \_\_\_\_\_

Answer(s) submitted:

•

•

(incorrect)

Correct Answers:

- 4
- -25

6. (1 point) set1/Gross\_1210\_summer200\_prob7.pg

The equation of the line that goes through the point (3,5) and is parallel to the line  $5x + 2y = 4$  can be written in the form  $y = mx + b$  where  $m$  is: \_\_\_\_\_

and where  $b$  is: \_\_\_\_\_

Answer(s) submitted:

•

•

(incorrect)

Correct Answers:

- -2.5
- 12.5

7. (1 point) set1/Gross\_1210\_summer200\_prob8.pg

The equation of the line that goes through the points (-5, -2) and (2,7) can be written in the form  $y = mx + b$  where  $m$  is:

and where  $b$  is: \_\_\_\_\_

Answer(s) submitted:

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(incorrect)

Correct Answers:

- 1.28571428571429
- 4.42857142857143

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**8. (1 point)** set1/srw1\_7\_49.pg

You arrive in Paris and the forecast is for a low of 20 and a high of 29 degrees Celsius. What is the forecasted low temperature in Fahrenheit? \_\_\_\_\_

What is the forecasted high temperature in Fahrenheit? \_\_\_\_\_

Answer(s) submitted:

- 
- 

(incorrect)

Correct Answers:

- 68
- 84.2

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**9. (1 point)** set1/ur\_ab\_7\_2.pg

Consider the inequality

$$x^2 < 2x + 15.$$

The solution of this inequality consists of one or more of the following intervals:  $(-\infty, A)$ ,  $(A, B)$ , and  $(B, \infty)$  where  $A < B$ .

Find  $A$  \_\_\_\_\_

Find  $B$  \_\_\_\_\_

For each interval, answer YES or NO to whether the interval is included in the solution.

$(-\infty, A)$  \_\_\_\_\_

$(A, B)$  \_\_\_\_\_

$(B, \infty)$  \_\_\_\_\_

Answer(s) submitted:

- 
- 
- 
- 
- 

(incorrect)

Correct Answers:

- -3
- 5
- no
- yes
- no

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**10. (1 point)** set1/srw1\_5\_35.pg

By completing the square, the expression  $x^2 + 12x + 101$  equals  $(x + A)^2 + B$

where  $A$  is: \_\_\_\_\_

and  $B$  is: \_\_\_\_\_

Answer(s) submitted:

- 
- 

(incorrect)

Correct Answers:

- 6
- 65

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**11. (1 point)** set1/Golden\_1210\_fall2001\_prob11.pg

Let  $f(x) = x^2 - 3$ . Find the slope of the curve  $y = f(x)$  at the point  $x = 1$

by calculating  $\frac{f(x+h) - f(x)}{h}$  and determining what number it approaches as  $h$  approaches 0.

$$\frac{f(x+h) - f(x)}{h} = \frac{f(1+h) - f(1)}{h} = \underline{\hspace{2cm}}$$

Slope of  $f(x)$  at  $x = 1$ : \_\_\_\_\_.

Answer(s) submitted:

- 
- 

(incorrect)

Correct Answers:

- $2 + h$
- 2

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**12. (1 point)** set1/Golden\_1210\_fall2001\_prob13.pg

Let  $f(x) = 2x + 5$ . Find  $f'(x)$  by calculating  $\frac{f(x+h) - f(x)}{h}$  and determining what it approaches as  $h$  approaches 0.

$$\frac{f(x+h) - f(x)}{h} = \underline{\hspace{2cm}} \quad f'(x) = \underline{\hspace{2cm}}.$$

Answer(s) submitted:

- 
- 

(incorrect)

Correct Answers:

- 2
- 2

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**13. (1 point)** set2/c0s2p1.pg

Relative to the graph of

$$y = x^2$$

the graphs of the following equations have been changed in what way?

\_\_\_1.  $y = (x - 10)^2$

\_\_\_2.  $y = x^2 + 10$

\_\_\_3.  $y = (x^2)/14$

\_\_\_4.  $y = 14x^2$

A. compressed vertically by the factor 14

B. shifted 10 units right

C. stretched vertically by the factor 14

D. shifted 10 units up

Answer(s) submitted:

- 
- 
- 
- 

(incorrect)

Correct Answers:

- B

- D
- A
- C

**14. (1 point)** set2/c0s1p9.pg

This problem gives you some practice identifying how more complicated functions can be built from simpler functions.

Let  $f(x) = x^3 - 27$  and let  $g(x) = x - 3$ . Match the functions defined below with the letters labeling their equivalent expressions.

- \_\_\_1.  $f(x^2)$
- \_\_\_2.  $(f(x))^2$
- \_\_\_3.  $g(x^2)$
- \_\_\_4.  $f(g(x))$

- A.  $-54 + 27x - 9x^2 + x^3$
- B.  $729 - 54x^3 + x^6$
- C.  $-27 + x^6$
- D.  $-3 + x^2$

Answer(s) submitted:

- 
- 
- 
- 

(incorrect)

Correct Answers:

- C
- B
- D
- A

**15. (1 point)** set2/s0\_1\_77-82.pg

For each of the following functions, decide whether it is even, odd, or neither. Enter E for an EVEN function, O for an ODD function and N for a function which is NEITHER even nor odd.

NOTE: You will only have four attempts to get this problem right!

- \_\_\_1.  $f(x) = -5x^8 - 3x^6 - 2$
- \_\_\_2.  $f(x) = x^8 + 3x^6 + 2x^3$
- \_\_\_3.  $f(x) = x^3 + x^3 + x^3$
- \_\_\_4.  $f(x) = x^{-2}$

Answer(s) submitted:

- 
- 
- 
- 

(incorrect)

Correct Answers:

- E
- N
- O
- E

**16. (1 point)** set2/s0\_1\_11a.pg

The domain of the function  $f(x) = \sqrt{3x - 56}$  is all real numbers in the interval  $[A, \infty)$  where A equals \_\_\_\_

Answer(s) submitted:

- 

(incorrect)

Correct Answers:

- 18.66666666666667