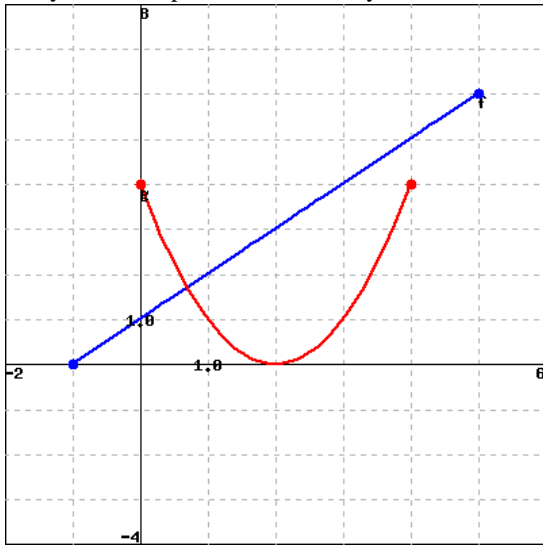


1. (1 point) set3/composition.pg

Let f be the linear function (in blue) and let g be the parabolic function (in red) below.

If you are having a hard time seeing the picture clearly, click on the picture. It will expand to a larger picture on its own page so that you can inspect it more closely.



Note: If the answer does not exist, enter 'DNE':

1. $(f \circ g)(2) = \underline{\hspace{2cm}}$
2. $(g \circ f)(2) = \underline{\hspace{2cm}}$
3. $(f \circ f)(2) = \underline{\hspace{2cm}}$
4. $(g \circ g)(2) = \underline{\hspace{2cm}}$
5. $(f + g)(4) = \underline{\hspace{2cm}}$
6. $(f / g)(2) = \underline{\hspace{2cm}}$

Answer(s) submitted:

-
-
-
-
-
-

(incorrect)

Correct Answers:

- 1
- 1
- 4
- 4
- 9
- DNE

2. (1 point) set3/srw2_10_17.pg

If f is one-to-one and $f(-14) = 5$, then

$f^{-1}(5) = \underline{\hspace{2cm}}$

and $(f(-14))^{-1} = \underline{\hspace{2cm}}$.

If g is one-to-one and $g(5) = 12$, then

$g^{-1}(12) = \underline{\hspace{2cm}}$

and $(g(5))^{-1} = \underline{\hspace{2cm}}$.

If h is one-to-one and $h(6) = 1$, then

$h^{-1}(1) = \underline{\hspace{2cm}}$

and $(h(6))^{-1} = \underline{\hspace{2cm}}$

Answer(s) submitted:

-
-
-
-
-
-

(incorrect)

Correct Answers:

- -14
- 0.2
- 5
- 0.0833333333333333
- 6
- 1

3. (1 point) set3/srw2_10_19.pg

If $f(x) = 4x - 6$, then

$f^{-1}(y) = \underline{\hspace{2cm}}$

$f^{-1}(-7) = \underline{\hspace{2cm}}$

Answer(s) submitted:

-
-

(incorrect)

Correct Answers:

- $(y+6)/4$
- -0.25

4. (1 point) set3/srw2_10_20.pg

If $f(x) = x^2$, $x \geq 0$,

then $f^{-1}(7) = \underline{\hspace{2cm}}$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 2.64575131106459

5. (1 point) set3/srw5_1_a.pg

For each of the following angles, find the degree measure of the angle with the given radian measure:

$\frac{5\pi}{6}$ _____

$\frac{5\pi}{4}$ _____

$\frac{2\pi}{3}$ _____

$\frac{7\pi}{2}$ _____

2π _____

Answer(s) submitted:

-
-
-
-
-

(incorrect)

Correct Answers:

- 150
- 225
- 120
- 630
- 360

6. (1 point) set3/srw5_1_c.pg

For each of the following angles, find the radian measure of the angle with the given degree measure (you can enter π as 'pi' in your answers):

-320 _____

290 _____

370 _____

260 _____

-290 _____

Answer(s) submitted:

-
-
-
-
-

(incorrect)

Correct Answers:

- -5.585066666666667
- 5.061466666666667
- 6.457733333333333
- 4.537866666666667
- -5.061466666666667

7. (1 point) set3/srw5_1_d.pg

For each of the following angles (in radian measure), find the sin of the angle (your answer cannot contain trig functions, it must be an arithmetic expression or number):

$\frac{\pi}{6}$ _____

$\frac{\pi}{4}$ _____

$\frac{\pi}{3}$ _____

$\frac{\pi}{2}$ _____

π _____

2π _____

Answer(s) submitted:

-
-

-
-
-
-

(incorrect)

Correct Answers:

- 0.5
- 0.707106781186548
- 0.866025403784439
- 1
- 0
- 0

8. (1 point) set3/srw5_1_e.pg

For each of the following angles (in radian measure), find the cos of the angle (your answer cannot contain trig functions, it must be an arithmetic expression or number):

$\frac{\pi}{6}$ _____

$\frac{\pi}{4}$ _____

$\frac{\pi}{3}$ _____

$\frac{\pi}{2}$ _____

π _____

2π _____

Answer(s) submitted:

-
-
-
-
-

(incorrect)

Correct Answers:

- 0.866025403784439
- 0.707106781186548
- 0.5
- 0
- -1
- 1

9. (1 point) set3/srwD_23e.pg

If $\theta = \frac{1\pi}{6}$, then

$\sin(\theta)$ equals _____

$\cos(\theta)$ equals _____

$\tan(\theta)$ equals _____

$\sec(\theta)$ equals _____

Answer(s) submitted:

-
-
-
-

(incorrect)

Correct Answers:

- 0.499999999481858
- 0.866025404083588
- 0.577350268391894
- 1.15470053798039

10. (1 point) set3/srw6_2_41.pg

The angle of elevation to the top of a building is found to be 12° from the ground at a distance of 4000 feet from the base of the building. Find the height of the building.

Hint: (Instructor hint preview: show the student hint after 5 attempts. The current number of attempts is 0.)

Hint: Did you convert degrees to radians?

Answer(s) submitted:

•

(incorrect)

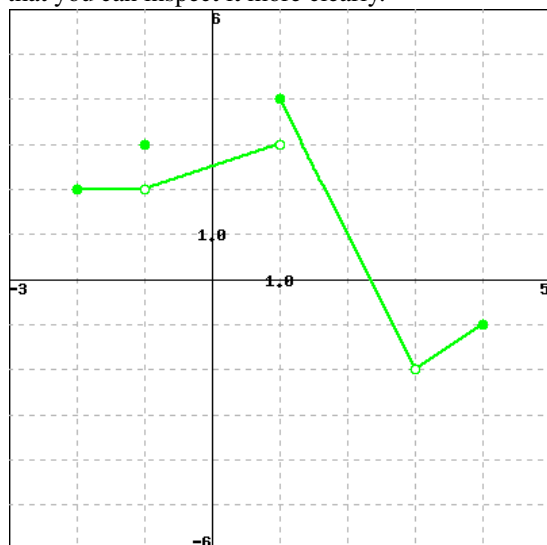
Correct Answers:

- 850.22624567956

11. (1 point) set3/limits.pg

Let F be the function below.

If you are having a hard time seeing the picture clearly, click on the picture. It will expand to a larger picture on its own page so that you can inspect it more clearly.



Evaluate each of the following expressions.

Note: Enter 'DNE' if the limit does not exist or is not defined.

- $\lim_{x \rightarrow -1^-} F(x) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow -1^+} F(x) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow -1} F(x) = \underline{\hspace{2cm}}$
- $F(-1) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow 1^-} F(x) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow 1^+} F(x) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow 1} F(x) = \underline{\hspace{2cm}}$
- $\lim_{x \rightarrow 3} F(x) = \underline{\hspace{2cm}}$
- $F(3) = \underline{\hspace{2cm}}$

Answer(s) submitted:

•
•
•
•
•
•
•
•
•
•

(incorrect)

Correct Answers:

- 2
- 2
- 2
- 3
- 3
- 4
- DNE
- -2
- DNE

12. (1 point) set3/probl.pg

Evaluate the limit

$$\lim_{x \rightarrow 3} \frac{x-3}{x^2+5x-24}$$

Answer(s) submitted:

•

(incorrect)

Correct Answers:

- 0.0909090909090909

13. (1 point) set3/prob2.pg

Evaluate the limit

$$\lim_{x \rightarrow 1} \frac{x^3-1}{x^2-1}$$

Answer(s) submitted:

•

(incorrect)

Correct Answers:

- 1.5

14. (1 point) set3/Golden_ns_2_3_1.pg

If $\lim_{x \rightarrow a} f(x) = 3$ and $\lim_{x \rightarrow a} g(x) = -1$ then

$$\lim_{x \rightarrow a} \frac{2f(x) - 3g(x)}{f(x) + g(x)} =$$

Answer(s) submitted:

•

(incorrect)

Correct Answers:

- 4.5

15. (1 point) set3/Golden_s1_3_3a.pg

Evaluate the limit

$$\lim_{w \rightarrow -2} \sqrt{-3w^3 + 7w^2}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 7.21110255092798

16. (1 point) set3/Golden_s1_3_3b.pg

Evaluate the right-hand limit

$$\lim_{x \rightarrow -\pi^+} \frac{\sqrt{\pi^3 + x^3}}{x} =$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 0