1. (1 pt)  Library/UCSB/Stewart5_6_1/Stewart5_6_1_1-1/Stewart5_6_1_1.pg

Find the area of the shaded region below.

Area = ______________
Answer(s) submitted:

(incorrect)

2. (1 pt)  Library/UCSB/Stewart5_6_1/Stewart5_6_1_4-4/Stewart5_6_1_4.pg

Find the area of the shaded region below.

Area = ______________
Answer(s) submitted:

(incorrect)

3. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_5.pg

Find the area of the region between the curves $y = x + 1$, $y = 9 - x^2$, $x = -1$, and $x = 2$.

Area between curves = ______________
Answer(s) submitted:

(incorrect)

4. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_7.pg

Find the area of the region between the curves $y = x$ and $y = x^2$.

Area between curves = ______________
Answer(s) submitted:

(incorrect)

5. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_8.pg

Find the area of the region between the curves $y = x^4$ and $y = x^2$.
Area between curves = ______________
Answer(s) submitted:

(incorrect)

6. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_12.pg

Find the area of the region between the curves $y = x$ and $y = \sqrt{x}$.
Area between curves = ______________
Answer(s) submitted:

(incorrect)

7. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_13.pg

Find the area of the region between the curves $y = 12 - x^2$ and $y = x^2 - 6$.
Area between curves = ______________
Answer(s) submitted:

(incorrect)

8. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_15.pg

Find the area of the region between the curves $y = \sqrt{x}$, $y = \frac{1}{2}x$, and $x = 9$.
Area between curves = ______________
Answer(s) submitted:

(incorrect)

9. (1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_16.pg

Find the area of the region between the curves $y = 8 - x^2$, $y = x^2$, $x = -3$, and $x = 3$.
Area between curves = ______________
Answer(s) submitted:

(incorrect)
10. Find the area of the region between the curves \( y = \sin(\pi x/2) \)
and \( y = x \).
Area between curves = __________
Answer(s) submitted:
• (incorrect)

11. Find the area of the region between the curves \( y = \sin(x) \),
\( y = \sin(2x) \), \( x = 0 \), and \( x = \pi/2 \).
Area between curves = __________
Answer(s) submitted:
• (incorrect)
1. (1 pt) Library/UCSB/Stewart5_5.4/Stewart5_5.4_53.pg

The velocity function (in meters per second) for a particle moving along a line is given by

\[ v(t) = 3t - 4, \quad 0 \leq t \leq 3. \]

(a) Find the displacement (in meters) of the particle.
Displacement = _______________ meters

(b) Find the total distance traveled (in meters) by the particle.
Total distance traveled = _______________ meters

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

2. (1 pt) Library/UCSB/Stewart5_5.4/Stewart5_5.4_54.pg

The velocity function (in meters per second) for a particle moving along a line is given by

\[ v(t) = -1(t^2 - 2t - 8), \quad 1 \leq t \leq 6. \]

(a) Find the displacement (in meters) of the particle.
Displacement = _______________ meters

(b) Find the total distance traveled (in meters) by the particle.
Total distance traveled = _______________ meters

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

3. (1 pt) UCR/Indiana_setIntegrals3Definite_int_in_3.1_UCR.pg

The velocity function is \( v(t) = -t^2 + 5t - 6 \) for a particle moving along a line. Find the displacement and the distance traveled by the particle during the time interval [-2,6].

Displacement = _______________
distance traveled = _______________

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

4. (1 pt) UCR/270_setDerivatives20Antideriv_c3s10p3_UCR.pg

A ball is shot straight up into the air with initial velocity of 44 ft/sec. Assuming that the air resistance can be ignored, how high does it go?

HINT: The acceleration due to gravity is -32 ft per second squared.

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

5. (1 pt) Library/270/setDerivatives20Antideriv/s3_10_67.pg

A stone is dropped from the edge of a roof, and hits the ground with a velocity of -125 feet per second. How high (in feet) is the roof?

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

6. (1 pt) Library/270/setDerivatives20Antideriv/s3_10_56.pg

A stone is thrown straight up from the edge of a roof, 900 feet above the ground, at a speed of 18 feet per second.
A. Remembering that the acceleration due to gravity is -32 feet per second squared, how high is the stone 2 seconds later?

B. At what time does the stone hit the ground?

C. What is the velocity of the stone when it hits the ground?

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

7. (1 pt) Library/270/setDerivatives20Antideriv/s3_10_51.pg

A particle is moving with acceleration \( a(t) = 3t + 2 \). Its position at time \( t = 0 \) is \( s(0) = 7 \) and its velocity at time \( t = 0 \) is \( v(0) = 8 \). What is its position at time \( t = 13 \)?

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)

8. (1 pt) Library/UCSB/Stewart5_5.4/Stewart5_5.4_55.pg

The acceleration function (in \( m/s^2 \)) and initial velocity for a particle moving along a line is given by

\[ a(t) = 2t + 8, \quad v(0) = 10, \quad 0 \leq t \leq 10. \]

(a) Find the velocity (in m/s) of the particle at time \( t \).
Velocity = _______________ meters

(b) Find the total distance traveled (in meters) by the particle.
Total distance traveled = _______________ meters

\[ \text{Answer(s) submitted:} \]

\[ \bullet \]

(incorrect)
9. (1 pt) Library/UCSB/Stewart5_5.4/Stewart5_5.4_56.pg

The acceleration function (in $m/s^2$) and initial velocity for a particle moving along a line is given by

\[ a(t) = -6t - 9, \quad v(0) = 12, \quad 0 \leq t \leq 3. \]

(a) Find the velocity (in m/s) of the particle at time $t$.

\[ v(t) = \quad \text{m/s} \]

(b) Find the total distance traveled (in meters) by the particle.

Total distance traveled = \quad \text{meters}

Answer(s) submitted:

•

•

(incorrect)
1. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_1.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2, x = 1, \) and \( y = 0 \) about the \( x \)-axis.

Volume = ____________
Answer(s) submitted:
• (incorrect)

2. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_4.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = \sqrt{x-1}, y = 0, x = 2, \) and \( x = 6 \) about the \( x \)-axis.

Volume = ____________
Answer(s) submitted:
• (incorrect)

3. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_5.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2, 0 \leq x \leq 3, y = 9, \) and \( x = 0 \) about the \( y \)-axis.

Volume = ____________
Answer(s) submitted:
• (incorrect)

4. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_6.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( x = y - y^2 \) and \( x = 0 \) about the \( y \)-axis.

Volume = ____________
Answer(s) submitted:
• (incorrect)

5. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_7.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2 \) and \( y^2 = x \) about the \( x \)-axis.

Volume = ____________
Answer(s) submitted:
• (incorrect)

6. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_12.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2 \) and \( y = 4 \) about the line \( y = 4 \).

Volume = ____________
Answer(s) submitted:
• (incorrect)

7. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_16.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x \) and \( y = \sqrt{x} \) about the line \( x = 2 \).

Volume = ____________
Answer(s) submitted:
• (incorrect)

8. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_18.png

Using disks or washers, find the volume of the solid obtained by rotating the region bounded by the curves \( y = x, y = 0, x = 2, \) and \( x = 4 \) about the line \( x = 1 \).

Volume = ____________
Answer(s) submitted:
• (incorrect)

9. (1 pt) Library/UCSB/Stewart5_6.2/Stewart5_6.2_20.png

Referring to the figure above, find the volume generated by rotating the region \( R_1 \) about the line \( OC \).

Volume = ____________
Answer(s) submitted:
• (incorrect)
10. (1 pt) Library/UCSB/Stewart5_6_2/Stewart5_6_2.26- Stewart5_6_2.26.pg

Referring to the figure above, find the volume generated by rotating the region $\mathcal{R}_2$ about the line $BC$.

Volume = 

Answer(s) submitted:

• (incorrect)

11. (1 pt) Library/UCSB/Stewart5_6_2/Stewart5_6_2.29- Stewart5_6_2.29.pg

Referring to the figure above, find the volume generated by rotating the region $\mathcal{R}_3$ about the line $AB$.

Volume = 

Answer(s) submitted:

• (incorrect)

12. (1 pt) Library/UCSB/Stewart5_6_2/Stewart5_6_2.32.pg

Which of the following integrals represents the volume of the solid obtained by rotating the region bounded by the curves $y = (x - 2)^2$ and $8x - y = 16$ about the line $x = 10$?

• A. $\pi \int_2^4 \left[ 10 - \left( \frac{1}{8} y + 2 \right) \right]^2 dy$

• B. $\pi \int_2^4 \left[ 10 - \left( \frac{1}{8} y + 2 \right)^2 \right] - \left[ 10 - \left( 2 + \sqrt{y} \right) \right] dy$

• C. $\pi \int_0^{16} \left[ 10 - \left( \frac{1}{8} y + 2 \right)^2 \right] - \left[ 10 - \left( 2 + \sqrt{y} \right) \right] dy$

• D. $\pi \int_0^{16} \left[ 10 - \left( \frac{1}{8} y + 2 \right)^2 \right] - \left[ 10 - \left( 2 + \sqrt{y} \right)^2 \right] dy$

• E. $\pi \int_2^4 \left[ 10 - \left( \frac{1}{8} y + 2 \right)^2 \right] - \left[ 10 - \left( 2 + \sqrt{y} \right)^2 \right] dy$

• F. $\pi \int_0^{16} \left[ 10 - \left( \frac{1}{8} y + 2 \right)^2 \right] - \left[ 10 - \left( 2 + \sqrt{y} \right)^2 \right] dy$

Answer(s) submitted:

• (incorrect)

13. (1 pt) Library/UCSB/Stewart5_6_2/Stewart5_6_2.34.pg

Which of the following integrals represents the volume of the solid obtained by rotating the region bounded by the curves $y = \sin(x)$ and $y = 0$, with $0 \leq x \leq \pi$, about the line $y = -2$?

• A. $\pi \int_{-2}^{0} \left[ \sin(x) - 2 \right] dx$

• B. $\pi \int_{0}^{\pi} \left[ \sin^2(x) + 2^2 - 2^2 \right] dx$

• C. $\pi \int_{0}^{\pi} \left[ \sin(x) - 2 \right] dx$

• D. $\pi \int_{-2}^{0} \left[ (\sin(x) + 2)^2 - (2)^2 \right] dx$

• E. $\pi \int_{0}^{\pi} \left[ (\sin(x) + 2)^2 - (2)^2 \right] dx$

• F. $\pi \int_{-2}^{0} \left[ \sin^2(x) + 2^2 - 2^2 \right] dx$

Answer(s) submitted:

• (incorrect)

14. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3.2.pg

Let $S$ be the solid obtained by rotating the region bounded by the curves $y = \sin(x^2)$ and $y = 0$, with $0 \leq x \leq \sqrt{\pi}$, about the $y$-axis. Use cylindrical shells to find the volume of $S$.

Volume = 

Answer(s) submitted:

• (incorrect)

15. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3.4.pg

Use the method of cylindrical shells to find the volume generated by rotating the region bounded by $y = x^2$, $y = 0$, and $x = 1$ about the $y$-axis.

Volume = 

Answer(s) submitted:

• (incorrect)

16. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3.6.pg

Use the method of cylindrical shells to find the volume generated by rotating the region bounded by $y = 3 + 2x - x^2$ and $x + y = 3$ about the $y$-axis.

Volume = 

Answer(s) submitted:

• (incorrect)
17. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_8.png

Let \( V \) be the volume of the solid obtained by rotating about the \( y \)-axis the region bounded by \( y = \sqrt{x} \) and \( y = x^2 \). Find \( V \) either by slicing (the disk/washer method) or by cylindrical shells.

Volume = __________

Answer(s) submitted:

•

(incorrect)

18. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_10.png

Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the curves \( x = \sqrt{y}, \ x = 0, \) and \( y = 1 \) about the \( x \)-axis.

Volume = __________

Answer(s) submitted:

•

(incorrect)

19. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_12.png

Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the curves \( x = 4y^2 - y^3 \) and \( x = 0 \) about the \( x \)-axis.

Volume = __________

Answer(s) submitted:

•

(incorrect)

20. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_14.png

Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the curves \( x + y = 3 \) and \( x = 4 - (y - 1)^2 \) about the \( x \)-axis.

Volume = __________

Answer(s) submitted:

•

(incorrect)

21. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_19.png

Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the curves \( y = \sqrt{x - 1}, \ y = 0, \) and \( x = 5 \) about the line \( y = 3 \).

Volume = __________

Answer(s) submitted:

•

(incorrect)

22. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_20.png

Use the method of cylindrical shells to find the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2 \) and \( x = y^2 \) about the line \( y = -1 \).

Volume = __________

Answer(s) submitted:

•

(incorrect)

23. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_22.png

Which of the following integrals represents the volume of the solid obtained by rotating the region bounded by the curves \( y = x \) and \( y = 4x - x^2 \) about the line \( x = 10 \)?

• A. \( \int_0^3 2\pi(10 - x) \left[ (4x - x^2) - x \right] \, dx \)

• B. \( \int_0^4 2\pi(10 - x) \left[ x - (4x - x^2) \right] \, dx \)

• C. \( \int_0^3 2\pi(10 - x) \left[ x - (4x - x^2) \right] \, dx \)

• D. \( \int_0^4 2\pi(x - 10) \left[ (4x - x^2) - x \right] \, dx \)

• E. \( \int_0^3 2\pi(x - 10) \left[ (4x - x^2) - x \right] \, dx \)

• F. \( \int_0^4 2\pi(10 - x) \left[ (4x - x^2) - x \right] \, dx \)

Answer(s) submitted:

•

(incorrect)

24. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_23.png

Which of the following integrals represents the volume of the solid obtained by rotating the region bounded by the curves \( y = x^2 \) and \( y = \sin\left(\frac{\pi}{2}x\right) \) about the line \( x = -2 \)?

• A. \( \int_0^1 2\pi(2 - x) \left( \sin\left(\frac{\pi}{2}x\right) - x^2 \right) \, dx \)

• B. \( \int_0^1 2\pi(x + 2) \left( x^4 - \sin\left(\frac{\pi}{2}x\right) \right) \, dx \)

• C. \( \int_0^1 2\pi(x - 2) \left( x^4 - \sin\left(\frac{\pi}{2}x\right) \right) \, dx \)

• D. \( \int_0^1 2\pi(x - 2) \left( \sin\left(\frac{\pi}{2}x\right) - x^4 \right) \, dx \)

• E. \( \int_0^1 2\pi(x + 2) \left( \sin\left(\frac{\pi}{2}x\right) - x^4 \right) \, dx \)

• F. \( \int_0^1 2\pi(2 - x) \left( x^4 - \sin\left(\frac{\pi}{2}x\right) \right) \, dx \)

Answer(s) submitted:

•

(incorrect)
25. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_24.png

Which of the following integrals represents the volume of the solid obtained by rotating the region bounded by the curves \( y = 1/(1 + x^2) \), \( y = 0 \), \( x = 0 \), and \( x = 7 \) about the line \( x = 7 \)?

- A. \( \int_{0}^{7} 2\pi (7 - x) \left( \frac{7}{1 + x^2} \right) dx \)
- B. \( \int_{0}^{7} 2\pi (7 + x) \left( \frac{7}{1 + x^2} \right) dx \)
- C. \( \int_{0}^{7} 2\pi (7 - x) \left( \frac{1}{1 + x^2} \right) dx \)
- D. \( \int_{0}^{7} 2\pi (7 + x) \left( \frac{1}{1 + x^2} \right) dx \)
- E. \( \int_{0}^{7} 2\pi (x - 7) \left( \frac{7}{1 + x^2} \right) dx \)
- F. \( \int_{0}^{7} 2\pi (x - 7) \left( \frac{1}{1 + x^2} \right) dx \)

Answer(s) submitted:

26. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_38.png

The region bounded by \( y = x^2 - 3x + 2 \) and \( y = 0 \) is rotated about the y-axis. Find the volume of the resulting solid by any method.

Volume = ____________

Answer(s) submitted:

27. (1 pt) Library/UCSB/Stewart5_6_3/Stewart5_6_3_40.png

The region bounded by \( x = 1 - y^4 \) and \( x = 0 \) is rotated about the line \( x = 2 \). Find the volume of the resulting solid by any method.

Volume = ____________

Answer(s) submitted:
1. (1 pt) Library/Utah/AP-Calculus I/set12_Further_Techniques_and_Applications/q3.pg
The average value of \( \sin x \) in the interval \([0, \pi]\) is ________.

Answer(s) submitted:
- (incorrect)

2. (1 pt) Library/ma122DB/set13/s6_5_1.pg
Find the average value of \( f(x) = x^3 \) on the interval \([3, 5]\).

Answer: ____________

Answer(s) submitted:
- (incorrect)

3. (1 pt) Library/UCSB/Stewart5_6_5/Stewart5_6_5_1.pg
Find the average value of the function \( f(x) = 6x^2 \) on the interval \([-1, 1] \).

\( f_{\text{ave}} = \) ____________

Answer(s) submitted:
- (incorrect)

4. (1 pt) Library/ma122DB/set13/s6_5_3.pg
Find the average value of \( f(x) = \cos(14x) \) on the interval \([0, \pi/2]\).

Answer: ____________

Answer(s) submitted:
- (incorrect)

5. (1 pt) Library/UVA-Stew5e/setUVA-Stew5e-C06S05-AveValue/6-5-06.pg
Find the average value of \( f(x) = 8 \sin x + 3 \cos x \) on the interval \([0, 19\pi/6]\)

Average value = ____________

Answer(s) submitted:
- (incorrect)

6. (1 pt) Library/UCSB/Stewart5_6_5/Stewart5_6_5_3.pg
Find the average value of the function \( g(x) = 3 \cos(x) \) on the interval \([0, \pi/2]\).

\( g_{\text{ave}} = \) ____________

Answer(s) submitted:
- (incorrect)

7. (1 pt) Library/UCSB/Stewart5_6_5/Stewart5_6_5_4.pg
Find the average value of the function \( g(x) = 2x^2 \sqrt{1+x^3} \) on the interval \([0, 2]\).

\( g_{\text{ave}} = \) ____________

Answer(s) submitted:
- (incorrect)

8. (1 pt) Library/UCSB/Stewart5_6_5/Stewart5_6_5_6.pg
Find the average value of the function \( f(t) = -9 \sec(t) \tan(t) \) on the interval \([0, \pi/4]\).

\( f_{\text{ave}} = \) ____________

Answer(s) submitted:
- (incorrect)

9. (1 pt) Library/UCSB/Stewart5_6_5/Stewart5_6_5_16-Stewart5_6_5_16.pg
The velocity of an accelerating car is shown in the graph below.

(a) Estimate the average velocity of the car during the first 12 seconds.

Average velocity \( \approx \) ________ km/h

(b) At approximately what time was the instantaneous velocity equal to the average velocity? Give your estimate to the nearest half-second.

Time \( \approx \) ________ seconds

Answer(s) submitted:
- (incorrect)
A car drives down a road in such a way that its velocity (in m/s) at time $t$ (seconds) is

$$v(t) = 2t^{1/2} + 2$$

Find the car’s average velocity (in m/s) between $t = 5$ and $t = 10$. 

Answer(s) submitted:
- (incorrect)
1. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_1.pg

Find the work done (in Joules) in pushing a car a distance of 8 meters while exerting a constant force of 900 N.

Work done = ________ Joules

Answer(s) submitted:

(incorrect)

2. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_2.pg

How much work is done (in Joules) by a weightlifter in raising a 60-kg barbell from the floor to a height of 2 m?

Work done = ________ Joules

Answer(s) submitted:

(incorrect)

3. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_4.pg

When a particle is located at a distance \( x \) meters from the origin, a force of \( \cos\left(\frac{\pi x}{3}\right) \) newtons acts on it.

(a) How much work (in Joules) is done in moving the particle from \( x = 1 \) to \( x = 1.5 \)?

Work done = ________ J

(b) How much work (in Joules) is done in moving the particle from \( x = 1.5 \) to \( x = 2 \)?

Work done = ________ J

(c) How much work (in Joules) is done in moving the particle from \( x = 1 \) to \( x = 2 \)?

Work done = ________ J

Answer(s) submitted:

(incorrect)

4. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_8.pg

A spring has a natural length of 20 cm. If a 25-N force is required to keep it stretched to a length of 30 cm, how much work (in J) is required to stretch it from 20 cm to 25 cm?

Work done = ________ J

Answer(s) submitted:

(incorrect)

5. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_10.pg

If the work required to stretch a spring 1 ft beyond its natural length is 12 ft-lb, how much work (in ft-lb) is needed to stretch it 9 in. beyond its natural length?

Work done = ________ ft-lb

Answer(s) submitted:

(incorrect)

6. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_14.pg

A chain lying on the ground is 10 m long and its mass is 80 kg. How much work (in J) is required to raise one end of the chain to a height of 6 m?

Work done = ________ J

Answer(s) submitted:

(incorrect)

7. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_15.pg

A cable that weighs 2 lb/ft is used to lift 800 lb of coal up a mineshaft 500 ft deep. Find the work done (in ft-lb).

Work done = ________ ft-lb

Answer(s) submitted:

(incorrect)

8. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_16.pg

A bucket that weighs 4 lb and a rope of negligible weight are used to draw water from a well that is 80 ft deep. The bucket starts with 40 lb of water and is pulled up at a rate of 2 ft/s, but water leaks out of a hole in the bucket at a rate of 0.2 lb/s. Find the work done (in ft-lb) in pulling the bucket to the top of the well.

Work done = ________ ft-lb

Answer(s) submitted:

(incorrect)

9. (1 pt) Library/UCSB/Stewart5_6.4/Stewart5_6.4_24pga/Stewart5_6.4_24b.pg

The tank shown below is full of water. Using the fact that the weight of water is 62.5 lb/ft³, find the work (in ft-lbs) required to pump the water out of the outlet. Make sure your answer is correct to within ten ft-lbs.
Work = ______ ft-lbs

Answer(s) submitted:

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(incorrect)