Question **1**

Not yet answered

Marked out of 0.71

Flag question

The length of a metal rod increases by 2.0 cm when its temperature is increased from 30^0 C to 394^0 C. Determine the original length of the rod (α

Select one:

- A. 150 cm
- B. 32 cm
- C. 67 cm
- D. 200 cm
- E. 121 cm

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Quiz navigation

1 2 3 4 5 6 7 8

Finish attempt ...

Time left **20:48:20**

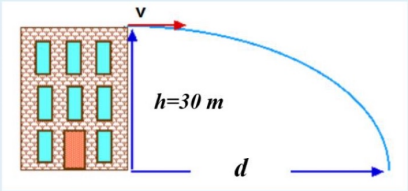
Question **2**

Not yet answered

Marked out of 0.63

Flag question

A ball is thrown horizontally from the top of a building that is 30.0 m high with a speed of 35.1 m/s. What is the distance ***d*** (in meters) from the bottom of the building the ball will hit the ground?



Select one:

- A. 86.85
- B. 133.38
- C. 107.41
- D. 57.56
- E. 61.43

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Quiz navigation

1 2 3 4 5 6 7 8

Finish attempt ...

Time left **20:45:02**

Question **3**

Not yet answered

Marked out of 0.63

Flag question

An object moves with a speed of 110.3 m/s, find its speed in the units of Km/h.

Select one:

- A. 3860.5
- B. 319.9
- C. 397.1
- D. 430.2
- E. 30.6

Clear my choice

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Quiz navigation

1 2 3 4 5
6 7 8

Finish attempt ...

Time left **20:31:27**

Question **4**

Not yet answered

Marked out of 0.63

Flag question

An object moves along the x-coordinate according to the equation:

$$x(t)=58t-28.5t^2$$.

Where **x** in units of **m** and t in units of **seconds.** Find the **position of the object** (in units of **m**) when the object changes its direction of motion along the x-axis.

Select one:

- A. 31.6
- B. 27.3
- C. 29.5
- D. 24.7
- E. 23.1

Clear my choice

فيزياء طبية/جميع الطلبة / الفصل الاول 2022-2021

Quiz navigation

1 2 3 4 5
6 7 8

Finish attempt ...

Time left **20:23:17**

Question **5**

Not yet answered

Marked out of 0.62

Flag question

The water in a river flows due north with a speed of **6.1 m/s**. A high-speed boat crosses the river with a velocity of **21.35 m/s** due east relative to the water. What is the magnitude of the velocity of the boat relative to the ground?

Select one:

- A. 27.45
- B. 22.20
- C. 16.10
- D. 21.35
- E. 12.20

Clear my choice

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1 2 3 4 5
6 7 8

Finish attempt ...

Time left **20:18:48**

Question **6**

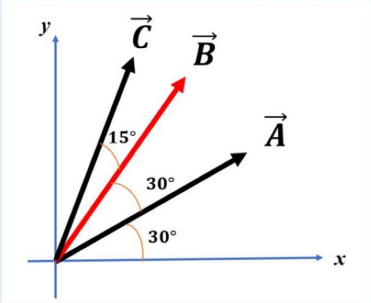
Not yet answered

Marked out of 0.63

Flag question

For the vectors in the figure below. If the vectors ***A, B and C*** have a magnitude of 11.2 unit, 15.6 unit and 24 unit respectively. Find the resultant vector ***R=A+B+C***

use $\hat{x}$=i and $\hat{y}$=j



Select one:

- A. R=23.71 i+ 32.92 j
- B. R=52.89 i+ 32.92 j
- C. R=48.48 i+ 19.62 j
- D. R=46.39 i+ 19.62 j
- E. R=23.71 i+ 42.29 j

Clear my choice

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Quiz navigation

1 2 3 4 5
6 7 8

Finish attempt ...

Time left **20:16:52**

Question **7**

Not yet answered

Marked out of 0.62

Flag question

An object moves along the x-coordinate according to the equation:

$$x(t)=11t-12t^2$$.

Where **x** in units of **m** and t in units of **seconds.** Find the **average velocity** (in units of **m/s**) over the time period **[1, 5]** s.

Select one:

- A. -61.0
- B. -48.0
- C. -37.0
- D. -67.0
- E. -32.2

Clear my choice

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6 7 8

Finish attempt ...

Time left **20:13:13**

Question **8**

Not yet answered

Marked out of 0.62

Flag question

A student suggested that acceleration is related to distance ***x*** and time ***t*** by the following expression:

$$a=k^2x^mt^n$$

Where **k** is constant with a dimension of $\frac{L}{T}$, Find the values of **m** and **n** that makes this relation dimensionally consistent?

Select one:

- A. m=1, n=2
- B. m=0, n=0
- C. m=-1, n=1
- D. m=3, n=0
- E. m=-1, n=0

Clear my choice

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Finish attempt ...

Time left **0:20:30**

Question **1**

Not yet answered

Marked out of 1.00

Flag question

If the only forces acting on a 2.0 kg mass are $\vec{F1} = (3\hat{x} + 3\hat{y})$ N and $\vec{F2} = (5\hat{x} + 3\hat{y})$ N, what is the **magnitude** and **direction** of the acceleration of the particle?

Select one:

- A. (5 m/s^2 , 37^0)
- B. (5 m/s^2 , -37^0)
- C. (2 m/s^2 , -53^0)
- D. (2 m/s^2 , 53^0)
- E. (2 m/s^2 , 45^0)

Clear my choice

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Finish attempt ...

Time left **0:16:19**

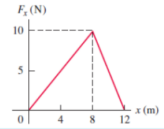
Question **2**

Not yet answered

Marked out of 1.00

Flag question

A force F_x is applied to a 6.0-kg box moving it along the x-axis. The force varies with distance as shown in **FIGURE**. If the box starts from rest at the origin, what is its speed at $x = 12$ m?



Select one:

- A. 4.5 m/s
- B. 4.9 m/s
- C. 5.5 m/s
- D. 2.8 m/s
- E. zero

Clear my choice

فيزياء طبية/جميع الطلبة / الفصل الاول 2022-2021

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Finish attempt ...

Time left **0:10:52**

Question **3**

Not yet answered

Marked out of 1.00

Flag question

A man moves a box horizontally by exerting on it a force of 90 N directed at 60° above the horizontal. If the work done on the box is 450 J, the displacement of the box is

Select one:

- A. 10 m
- B. 5 m
- C. 20 m
- D. 15 m
- E. 25 m

Clear my choice

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Finish attempt ...

Time left **4:39:21**

Question **4**

Not yet answered

Marked out of 0.71

Flag question

If two temperatures differ by 45 degrees on Celsius scale, the difference of temperature on Fahrenheit scale is:

Select one:

- A. 81 degrees
- B. 110 degrees
- C. 45 degrees
- D. 49 degrees
- E. 32 degrees

Clear my choice

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1 2 3 4 5

Finish attempt ...

Time left **0:01:50**

Question **5**

Answer saved

Marked out of 1.00

Flag question

A body is hanging from a balance supported form the ceiling of an elevator. The balance reads 100 N when the elevator is stationary. If the elevator moves with an upward acceleration of 3 m/s^2, what will be the reading of the balance?

Select one:

- A. 130 N
- B. 100 N
- C. 80 N
- D. 150 N
- E. 60 N

Clear my choice

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Finish attempt ...

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Finish attempt ...

Time left **0:16:58**

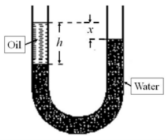
Question **1**

Not yet answered

Marked out of 1.00

Flag question

A U-shaped tube is filled with water and oil as shown in the Figure. If h=20 cm and x=4.0 cm, find the density of the oil.



Select one:

- A. 0.9 g/cm^3
- B. 0.5 g/cm^3
- C. 0.7 g/cm^3
- D. 1.2 g/cm^3
- E. 0.8 g/cm^3

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Finish attempt ...

Time left **0:15:17**

Question **2**

Not yet answered

Marked out of 1.00

Flag question

The rate of flow of water through a horizontal pipe is 2.0 m^3/minute. Determine the speed of flow at a point where the radius of the pipe is 4.0 cm.

Select one:

- A. 400 m/s
- B. 6.6 m/s
- C. 0.84 m/s
- D. 2.3 m/s
- E. 9.8 m/s

Clear my choice

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Finish attempt ...

Time left **0:14:13**

Question **3**

Not yet answered

Marked out of 1.00

Flag question

Water is flowing through a circular pipe that has a radius of 0.08 m. The velocity of the water is 5.3 m/s. What is the flow rate of the water?

Select one:

- A. 0.139 m^3/s
- B. 0.097 m^3/s
- C. 0.106 m^3/s
- D. 0.397 m^3/s
- E. 0.167 m^3/s

Clear my choice

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Finish attempt ...

Time left **0:12:03**

Question **4**

Not yet answered

Marked out of 1.00

Flag question

The gauge pressure at a point 3 m below an open surface of a tank filled with water is

Select one:

- A. 30 KPa
- B. 98 KPa
- C. 40 KPa
- D. 90 KPa
- E. 87 KPa

Clear my choice

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Quiz navigation

1 2 3 4 5

Finish attempt ...

Time left **0:01:34**

Question **5**

Not yet answered

Marked out of 1.00

Flag question

A 10.0 kg rock whose density is 5×10^3 kg/m^3 is suspended in water by a string such that half of the rock's volume is inside the water. What is the tension in the string?

Select one:

- A. 90 N
- B. 110 N
- C. 80 N
- D. 55 N
- E. 60 N

Clear my choice

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Finish attempt ...

Subject :

* An object moves with a speed of 33.1 m/s find its speed in the units of Km/h

$$\Rightarrow S = 33{,}1 \frac{m}{s} \times \frac{Km}{10^3 m} \times \frac{3600\, s}{1\, h}$$

$$= 119{,}2 \frac{Km}{h} \quad (\text{Ans})$$

* An object moves along (x) coordinate according to the equation:

$$X(t) = 70{,}6\, t - 29{,}4\, t^2$$

→ find position of object when object changes its direction of motion along the x-axis. $\Rightarrow V = 0$

$$\Rightarrow\Rightarrow \quad U(t) = 70{,}6 - 58{,}8\, t = 0$$

$$t = \frac{70{,}6}{58{,}8} = 1{,}2 \ (s)$$

* $X(1{,}2) = 70{,}6 \times 1{,}2 - 29{,}4\,(1{,}2)^2$

$$= 84{,}7 - 42{,}3 = 42{,}4\ m$$

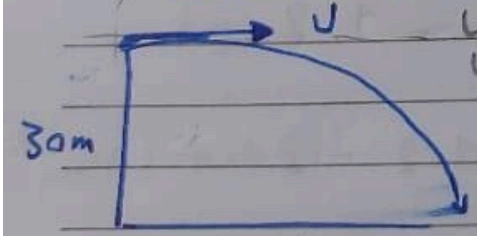
Subject :

* The water in river flows due north with speed of 14,2 m/s. A high speed boat crosses the river with a velocity of 19,7 m/s due east relative to the water. What is magnitude of velocity of boat relative ground?

$$\overline{V} = \sqrt{(14,2)^2 + (19,7)^2}$$

$$= 51,69.$$

* ball is thrown horizontally from top building that 30 m high with speed of (25,3). what is the distance (d) from bottom of building the ball will hit ground ??



$V_{x_0} = V_x$

$V_y = 0$

$$\Rightarrow y = V_y t - \frac{1}{2} g t^2$$

$$-30 = 0 - \frac{1}{2} \times 9,8 t^2$$

$$t^2 = \frac{30}{4,9} = 2,5 \text{ s}$$

* $X = V_{0x} t$

$= 25,3 \times 2,5$

$= 63,2$

Subject :

* ball is thrown upward with speed 28.6 m/s, find maximum height the ball can reach $v_2 = 0$, $v_1 = 28.6$

* $v_2^2 = v_1^2 - 2gy$

$0 = 817.9 - 2 \times 9.8 y$

$817.9 = 19.6 y$

$y = \frac{817.9}{19.6} = 41.7$

* $x(t) = 4t - 15t^2$

Find average velocity over the time period $[1, 5]$.

$x(5) = 4 \times 5 - 15 \times 25 = -355$

$x(1) = 4 \times 1 - 15 \times 1 = -11$

$\bar{v} = \frac{x(5) - x(1)}{4} = \frac{-355 - (-11)}{4}$

$= \frac{-344}{4} = -86$