

أسئلة امتحانات سابقة الدرس الخامس Motion Projectile من الوحدة السادسة



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ← المناهج الإماراتية ← الصف الثاني عشر المتقدم ← رياضيات ← الفصل الثالث ← ملفات متنوعة ← الملف

تاريخ إضافة الملف على موقع المناهج: 2026-04-25 10:49:08

ملفات اكتب للمعلم اكتب للطالب الاختبارات الكترونية الاختبارات ا حلول ا عروض بوربوينت ا أوراق عمل
منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي للمدرس

المزيد من مادة
رياضيات:

إعداد: علي عبد الله

التواصل الاجتماعي بحسب الصف الثاني عشر المتقدم



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة رياضيات في الفصل الثالث

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1. A diver drops from a height of 64 feet. Which of the following gives the initial conditions?

A. $h(0) = 64\text{ft}, h'(0) = 0$

B. $h(0) = 64\text{ft}, h'(0) = 32\text{ ft/s}$

C. $h(0) = 64\text{ft}, h''(t) = 9.8\text{ ft/s}$

D. $h(0) = 0, h''(t) = -32\text{ ft/s}^2$

2. A diver drops from a height of 64 feet. What is the velocity at impact?

A. 32 ft/s

B. 23 ft/s

C. 64 ft/s

D. 46 ft/s

3. Identify the initial condition $y(0)$ and $y'(0)$ for the vertical motion, if the object is thrown at a velocity of 6 m/s from a height of 30 m . (Take the origin to be the ground)

A. $y(0) = 30, y'(0) = -6$

B. $y(0) = 0, y'(0) = -6$

C. $y(0) = 30, y'(0) = 6$

D. $y(0) = 0, y'(0) = 6$

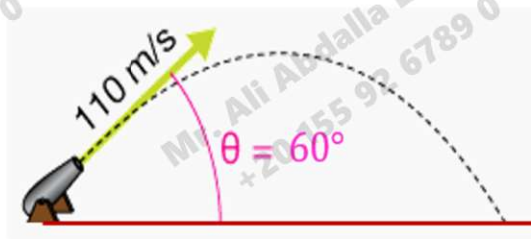
4. For an object moving in two dimensions shown in figure below. What is the initial value of the vertical component of the velocity?

A. $y'(0) = 110 \sin(60) = 55\sqrt{3}\text{m/s}$

B. $y'(0) = 110 \cos(60) = 55\text{ m/s}$

C. $y'(0) = 110 \tan(60) = 110\sqrt{3}\text{m/s}$

D. $y'(0) = \frac{110}{\sin(60)} = \frac{55}{\sqrt{3}}\text{m/s}$



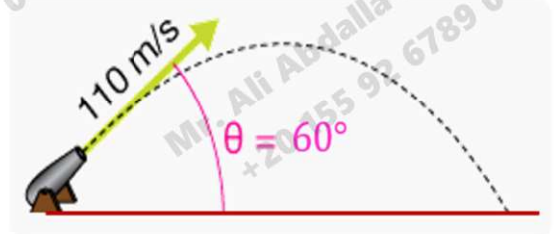
5. For an object moving in two dimensions shown in figure below. What is the vertical acceleration?

A. $y''(t) = -32 \text{ ft/s}^2$

B. $y''(t) = 32 \text{ ft/s}^2$

C. $y''(t) = -9.8 \text{ m/s}^2$

D. $y''(t) = 0$



6. If an object dropped from a height of H feet, at what time t it will hit the ground?

A. $t = \frac{1}{4}\sqrt{H}$

B. $t = \frac{1}{2}\sqrt{H}$

C. $t = 8\sqrt{H}$

D. $t = 4\sqrt{H}$

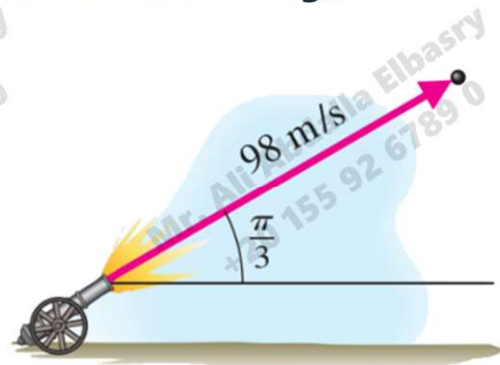
7. An object is launched at angle $\theta = \frac{\pi}{3}$ radians from the horizontal with an initial speed of 98 m/s . Determine the time of flight.

A. 18.32

B. 17.32

C. 19.32

D. 16.32



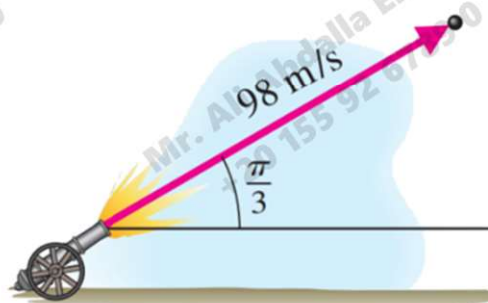
8. An object is launched at angle $\theta = \frac{\pi}{3}$ radians from the horizontal with an initial speed of 98 m/s . Which of the following give the horizontal range?

A. $x(t) = 98t$

B. $x(t) = 49\sqrt{3}t$

C. $x(t) = \sqrt{3}t$

D. $x(t) = 49t$



9. A diver drops from 30 ft above the water. Which of the following give the height of the diver at time t ?

A. $h(t) = -16t^2 + 30$

B. $h(t) = 16t^2 + 30$

C. $h(t) = -4.9t^2 + 30$

D. $h(t) = 4.9t^2 + 30$

10. A ball is propelled straight upward from the ground with initial velocity 64 ft/s . Ignoring air resistance, determine the amount of time the ball spends in the air.

A. 2

B. 3

C. 4

D. 5

11. A certain not-so-wily coyote discovers that he just stepped off the edge of a cliff. Four seconds later, he hits the ground in a puff of dust. How high in meters was the cliff?

A. Height = 78.4 m

B. Height = 88.4 m

C. Height = 98.2 m

D. Height = 49.2 m

12. The coyote's next scheme involves launching himself into the air with an Acme catapult. If the coyote is propelled vertically from the ground with initial velocity 19.6 m/s , find an equation for the height of the coyote at any time t .

A. $h(t) = -16t^2 + 19.6t$

B. $h(t) = -16t^2 + 19.6$

C. $h(t) = -4.9t^2 + 19.6$

D. $h(t) = -4.9t^2 + 19.6t$

13. The coyote's next scheme involves launching himself into the air with an Acme catapult. If the coyote is propelled vertically from the ground with initial velocity 19.6 m/s , Find his maximum height.

A. $h(t) = 19.6 \text{ m}$

B. $h(t) = 13.4 \text{ m}$

C. $h(t) = 29.6 \text{ m}$

D. $h(t) = 9.8 \text{ m}$

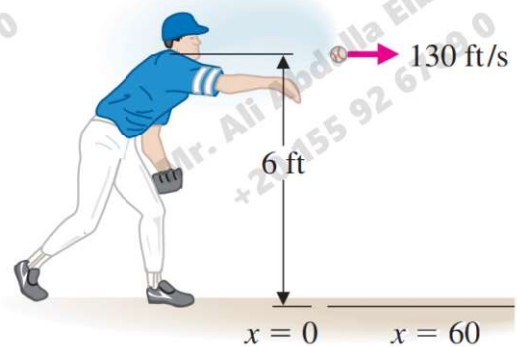
14. A baseball pitcher releases the ball horizontally from a height of 6 ft with an initial speed of 130 ft/s . Find the height of the ball when it reaches home plate 60 feet away.

A. $y\left(\frac{6}{13}\right) \approx 1.59 \text{ ft}$

B. $y\left(\frac{6}{13}\right) = 2.95 \text{ ft}$

C. $y\left(\frac{6}{13}\right) = 2.59 \text{ ft}$

D. $y\left(\frac{6}{13}\right) = 2.89 \text{ ft}$



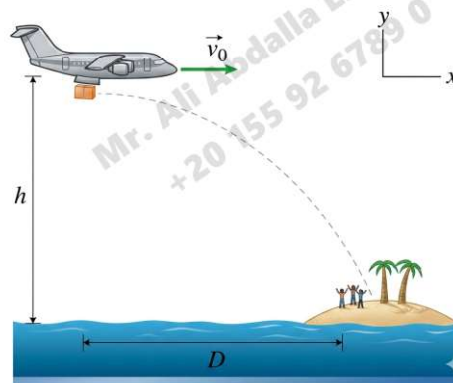
15. A plane at an altitude of 256 feet want to drop supplies to a specific location on the ground. If the plane has a horizontal velocity of 100 ft/s , how far away from the target should the plane release the supplies in order to hit the target location?

A. $D = 300 \text{ ft}$

B. $D = 400 \text{ ft}$

C. $D = 200 \text{ ft}$

D. $D = 350 \text{ ft}$



16. An object is launched from the ground at an angle $\theta = 20^\circ$ with an initial speed of 48 m/s . Find the time of the flight? (ignore the air resistance)

A. $t = 1.026 \text{ s}$

B. $t = 16.4 \text{ s}$

C. $t = 2.03 \text{ s}$

D. $t = 45.1 \text{ s}$

17. One of the authors has a vertical "jump" of 20 in. What is the initial velocity required to jump this high?

A. $v_0 = 1.033 \text{ ft/s}$

B. $v_0 = 10.33 \text{ ft/s}$

C. $v_0 = 103.3 \text{ ft/s}$

D. $v_0 = 8\sqrt{5} \text{ ft/s}$

18. A diver drops from 120 feet above the water (about the height of divers at the Acapulco Cliff Diving competition). What is the diver's velocity at impact?

A. $v = 16\sqrt{30} \text{ ft/s}$

B. $v = 16\sqrt{3} \text{ ft/s}$

C. $v = -16\sqrt{30} \text{ ft/s}$

D. $v = -16\sqrt{3} \text{ ft/s}$

QUIZ BUBBLE SHEET

1. A B C D7. A B C D13. A B C D2. A B C D8. A B C D14. A B C D3. A B C D9. A B C D15. A B C D4. A B C D10. A B C D16. A B C D5. A B C D11. A B C D17. A B C D6. A B C D12. A B C D18. A B C D