

A-Level Edexcel

# PHYSICS

UNIT 1(IAL)

2019 — 2023

Chapter 1	<b>Mechanics</b>	Page 1
Chapter 2	<b>Materials</b>	Page 191
Chapter 3	<b>Waves and Particle Nature of Light</b>	-----
Chapter 4	<b>Electric Circuits</b>	-----
Chapter 5	<b>Further Mechanics</b>	-----
Chapter 6	<b>Electric and Magnetic Fields</b>	-----
Chapter 7	<b>Nuclear and Particle Physics</b>	-----
Chapter 8	<b>Thermodynamics</b>	-----
Chapter 9	<b>Nuclear Decay</b>	-----
Chapter 10	<b>Oscillations</b>	-----
Chapter 11	<b>Astrophysics and Cosmology</b>	-----
	<b>Answers</b>	Page 255

1 - (WPH11/1(IAL)\_Summer\_2019\_Q1) - *Mechanics*

Quantities in physics are classified as either vectors or scalars.

Which of the following units could **only** be used for a scalar quantity?

- A  $\text{m s}^{-1}$
- B  $\text{m s}^{-2}$
- C  $\text{kg m s}^{-2}$
- D  $\text{kg m}^{-3}$

www.exam-mate.com

2 - (WPH11/1(IAL)\_Summer\_2019\_Q2) - Mechanics

Once in orbit above the Earth's atmosphere, the engines on a space rocket are switched off.

Which row of the table correctly states the resulting motion of the rocket and the law explaining this motion?

	Motion of rocket	Explanation
<input type="checkbox"/> A	uniform velocity	Newton's 2 <sup>nd</sup> law
<input type="checkbox"/> B	uniform velocity	Newton's 3 <sup>rd</sup> law
<input type="checkbox"/> C	changing velocity	Newton's 2 <sup>nd</sup> law
<input type="checkbox"/> D	changing velocity	Newton's 3 <sup>rd</sup> law

**3** - (WPH11/1(IAL)\_Summer\_2019\_Q3) - *Mechanics*

A sphere of weight  $2.5\text{ N}$  floats in water with  $\frac{1}{2}$  of its volume beneath the surface.

A force  $F$  is applied to the sphere, completely immersing it in the water as shown.

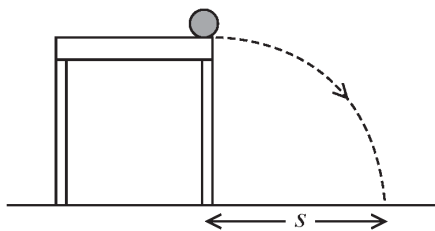


Which of the following is the minimum value of  $F$ ?

- A  $2 \times 2.5\text{ N}$
- B  $1 \times 2.5\text{ N}$
- C  $\frac{1}{2} \times 2.5\text{ N}$
- D  $\frac{1}{4} \times 2.5\text{ N}$

## 4 - (WPH11/1(IAL)\_Summer\_2019\_Q4) - Mechanics

A ball rolls off a table with a horizontal velocity of  $1.2 \text{ m s}^{-1}$ . The ball takes  $0.9 \text{ s}$  to reach the ground and lands a distance  $s$  from the table as shown.



Which of the following expressions could be used to determine the value of  $s$  in metres?

- A  $\frac{1.2^2}{2 \times 9.81}$
- B  $1.2 \times 0.9$
- C  $\frac{1}{2} \times 9.81 \times 0.9^2$
- D  $(1.2 \times 0.9) + (\frac{1}{2} \times 9.81 \times 0.9^2)$

5 - (WPH11/1(IAL)\_Summer\_2019\_Q5) - *Mechanics*

A sample of sea water is collected using a beaker. The sample contains some particles of sand which settle at the bottom of the beaker.

Which of the following would result in a decrease in the time taken for the sand to settle?

- A smaller particles of sand
- B lower temperature of the sea water
- C smaller terminal velocity of sand particles
- D lower viscosity of the sea water

www.exam-mate.com

# ANSWERS

[www.exam-mate.com](http://www.exam-mate.com)

1 - (WPH11/1(IAL)\_Summer\_2019\_Q1) - *Mechanics*

D

2 - (WPH11/1(IAL)\_Summer\_2019\_Q2) - *Mechanics*

C

3 - (WPH11/1(IAL)\_Summer\_2019\_Q3) - *Mechanics*

B

4 - (WPH11/1(IAL)\_Summer\_2019\_Q4) - *Mechanics*

B

5 - (WPH11/1(IAL)\_Summer\_2019\_Q5) - *Mechanics*

D

6 - (WPH11/1(IAL)\_Summer\_2019\_Q7) - *Mechanics*

B

7 - (WPH11/1(IAL)\_Summer\_2019\_Q8) - *Mechanics*

C

8 - (WPH11/1(IAL)\_Summer\_2019\_Q9) - *Mechanics*

B

9 - (WPH11/1(IAL)\_Summer\_2019\_Q10) - *Mechanics*

C