

The Physics of Energy, Explained Simply & The Physics of Energy For Beginners

Work Done Questions

- $W = F \times d$ (when force is in the direction of motion)
- $F = \text{Force}$, $d = \text{Distance}$
- $W = F \times d \times \cos(\theta)$ (when force is at an angle θ to the direction of motion)

1. $W = 100 \text{ N} \times 5 \text{ m} = 500 \text{ J}$

2. $W = 500 \text{ N} \times 20 \text{ m} = 10000 \text{ J}$

3. $W = 150 \text{ N} \times 1.5 \text{ m} = 225.0 \text{ J}$

4. $W = 2000 \text{ N} \times 10 \text{ m} = 20000 \text{ J}$

5. $W = 250 \text{ N} \times 8 \text{ m} = 2000 \text{ J}$

6. $W = 120 \text{ N} \times 10 \text{ m} \times \cos(30^\circ) = 1039.23 \text{ J}$

7. $W = 100 \text{ N} \times 15 \text{ m} \times \cos(45^\circ) = 1060.66 \text{ J}$

8. $W = 300 \text{ N} \times 5 \text{ m} \times \cos(60^\circ) = 750.0 \text{ J}$

9. $W = 400 \text{ N} \times 4 \text{ m} \times \cos(20^\circ) = 1503.51 \text{ J}$

10. $W = 90 \text{ N} \times 7 \text{ m} \times \cos(35^\circ) = 516.07 \text{ J}$

