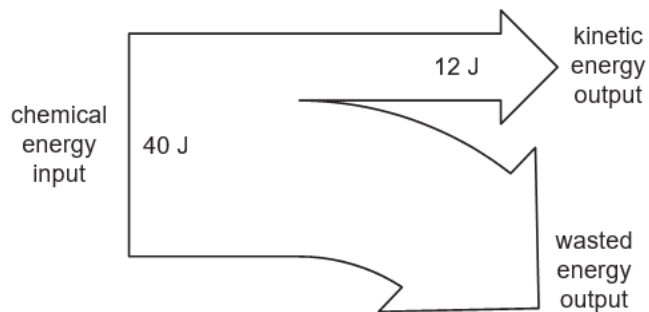


GCSE Physics B (Twenty First Century Science)
J259/01 Breadth in Physics (Foundation Tier)

Question Set 33

1 A Sankey diagram can be used to show how a device transfers energy.

The Sankey diagram below is for a car speeding up.



(a) Calculate the wasted energy output.

$$40 - 12 = 28 \text{ J}$$

Wasted energy output =28..... J [1]

(b) Calculate the efficiency of the car.

Use values from the Sankey diagram.

Use the equation: efficiency = useful energy transferred ÷ total energy transferred

Give your answer as a **percentage**.

$$\text{Efficiency} = \frac{12}{40} \times 100 = 30\%$$

Efficiency =30.....% [3]

Total Marks for Question Set 33: 4

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