

(Science Focus) Maths Word Problems – UKS2 – Year 5

1. A citywide recycling programme collected 12,450 kilograms of waste in the first month and 18,325 kilograms in the second month. How much waste was collected in total over the two months?
2. A renewable energy project was expected to generate 25,640 kilowatts of power, but it only managed to produce 19,875 kilowatts. How many fewer kilowatts were produced than expected?
3. A wind farm generates 425 kilowatts of electricity per day. How much electricity does it generate in 28 days?
4. A beach cleanup group collected 9,680 kilograms of rubbish over 16 days. How many kilograms of rubbish were collected on average each day?
5. A wildlife park covers 2,500 hectares of land, and $\frac{2}{5}$ of the land is reserved for conservation. How many hectares are set aside for conservation?
6. A school reduced its plastic waste by 30%. If they originally produced 4,500 kilograms of plastic waste, how many kilograms of waste were saved?
7. A solar panel has a length of 15 metres and a width of 10 metres. What is the area of the solar panel?
8. A rectangular garden designed for biodiversity measures 30 metres in length and 18 metres in width. What is the perimeter of the garden?
9. A team of volunteers plants 55 trees every hour. If they work for 6 hours, how many trees will they plant? If another team works for 4 hours and plants 65 trees per hour, how many trees will both teams plant together?
10. For every 4 recycling bins of paper, there are 5 bins of plastic. If there are 20 bins of paper, how many bins of plastic are there?

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MARK SCHEME

1. $12,450 + 18,325 = 30,775$ kilograms of waste.
2. $25,640 - 19,875 = 5,765$ kilowatts fewer.
3. $425 \times 28 = 11,900$ kilowatts of electricity.
4. $9,680 \div 16 = 605$ kilograms of rubbish per day.
5. $2/5 \times 2,500 = 1,000$ hectares reserved for conservation.
6. $30\% \times 4,500 = 0.30 \times 4,500 = 1,350$ kilograms of waste saved.
7. Area = $15 \times 10 = 150\text{m}^2$.
8. Perimeter = $2 \times (30+18) = 2 \times 48 = 96$ metres.
9. First team:
 $55 \times 6 = 330$ trees.
Second team:
 $65 \times 4 = 260$ trees.
Total trees planted:
 $330 + 260 = 590$ trees.
10. Total bins in ratio $4 + 5 = 9$ parts.
If there are 20 bins of paper, each part = $20 \div 4 = 5$.
Plastic bins: $5 \times 5 = 25$ bins of plastic.