



11+ Maths: Word Problems

Original JDScience material. Not an official GL, CEM, CSSE or independent-school paper. Do not copy third-party exam questions.

Read each story carefully. Show working. Include units in your answers where they are needed (for example £, minutes, metres).

Suggested time: 30 minutes · **Questions:** 16

1. Amina buys 3 notebooks at £1.45 each and a pen for 80p. She pays with a £10 note. How much change should she receive? [1]
2. A bus leaves Oakmead at 08:47 and arrives at Riverwell at 09:21. How long is the journey? [1]
3. The ratio of red counters to blue counters in a bag is 3:5. There are 24 red counters. How many blue counters are there? [1]
4. Sam is 9 years old. His sister is 4 years older. In 6 years, what will the total of their ages be? [1]
5. A rectangle garden is 12 m long and 7 m wide. Fencing costs £8 per metre. How much does it cost to fence the whole perimeter? [1]
6. A recipe for 8 biscuits uses 120 g of flour. How many grams of flour are needed for 20 biscuits? [1]
7. Priya cycles 4.5 km to school and the same distance home, five days a week. How far does she cycle in a week? [1]
8. A shop reduces a £64 coat by 25%. What is the sale price? [1]
9. Three friends share £54 in the ratio 2:3:4. How much does the person with the largest share receive? [1]
10. A film starts at 14:50 and lasts 1 hour 35 minutes. At what time does it finish? [1]
11. There are 180 pupils in Year 6. $\frac{2}{5}$ of them take the 11+. How many pupils do not take the 11+? [1]
12. A tank holds 8 litres. It is $\frac{3}{4}$ full. How many millilitres of water are in the tank? [1]
13. Lee walks 800 m in 10 minutes at a steady speed. How far does he walk in 1 hour at the same speed? [1]
14. Tickets cost £6 for adults and £3.50 for children. A family of 2 adults and 3 children pays. How much is the total? [1]
15. A number machine multiplies by 4 then subtracts 11. The output is 37. What was the input? [1]
16. Boxes hold 18 crayons. How many full boxes can be filled from 250 crayons, and how many crayons are left over? [1]

Answers and short explanations

Check your work only after you have finished. Equivalent wording is accepted where the meaning is the same.

- 1. Answer:** £4.85
Why: $3 \times £1.45 = £4.35$. Pen = £0.80. Total = £5.15. Change: $£10.00 - £5.15 = £4.85$.
- 2. Answer:** 34 minutes
Why: From 08:47 to 09:00 is 13 minutes, then 21 more minutes: $13 + 21 = 34$.
- 3. Answer:** 40
Why: Red is 3 parts = 24, so 1 part = 8. Blue is 5 parts: $5 \times 8 = 40$.
- 4. Answer:** 34 years
Why: Now: 9 and 13. In 6 years: 15 and 19. Total 34. Or $9 + 13 + 12 = 34$.
- 5. Answer:** £304
Why: Perimeter = $2 \times (12 + 7) = 38$ m. $38 \times £8 = £304$.
- 6. Answer:** 300 g
Why: Flour per biscuit = $120 \div 8 = 15$ g. $20 \times 15 = 300$ g.
- 7. Answer:** 45 km
Why: Each day 9 km. $9 \times 5 = 45$ km.
- 8. Answer:** £48
Why: 25% of 64 = 16. $64 - 16 = 48$.
- 9. Answer:** £24
Why: Parts: $2 + 3 + 4 = 9$. One part = £6. Largest share $4 \times 6 = £24$.
- 10. Answer:** 16:25
Why: $14:50 + 1 \text{ hour} = 15:50$. $15:50 + 35 \text{ minutes} = 16:25$.
- 11. Answer:** 108
Why: $2/5$ of 180 = 72 take it. $180 - 72 = 108$ do not.
- 12. Answer:** 6000 ml
Why: $3/4$ of 8 l = 6 l. 6 litres = 6000 ml.
- 13. Answer:** 4800 m (or 4.8 km)
Why: In 10 minutes he walks 800 m, so in 60 minutes he walks $6 \times 800 = 4800$ m.
- 14. Answer:** £22.50
Why: Adults: $2 \times 6 = £12$. Children: $3 \times 3.50 = £10.50$. Total £22.50.
- 15. Answer:** 12
Why: Reverse: $37 + 11 = 48$, then $48 \div 4 = 12$.
- 16. Answer:** 13 boxes, 16 left over
Why: $18 \times 13 = 234$. $250 - 234 = 16$ remainder.