

## Let's Practise Bar Models (KS2): 25 scaffolded word problems

1. 3 boys played a computer game. They scored 45 points, 36 points and 11 points. What was the total points they scored?

$$45 + 36 + 11 = 92$$

2. Jinnie is 134cm tall. Her sister is 107cm tall. How much taller is Jinnie than her sister?

$$134\text{cm} - 107\text{cm} = 27\text{cm}$$

3. Gingerbread men come in packets of 6. Paul buys 4 packets. How many gingerbread men does he have?

$$6 \times 4 = 24$$

4. Lucy has 56 tulips. She wants to share them equally into 8 vases. How many tulips should be in each vase?

$$56 \div 8 = 7$$

5. What is  $\frac{3}{5}$  of 40?

$$40 \div 5 = 8$$

$$8 \times 3 = 24$$

6.  $c = 4a + 2b$   
Where  $a=7$  and  $b=9$ , what is  $c$ ?

$$4 \times 7 = 28$$

$$9 \times 2 = 18$$

$$28 + 18 = 46$$

7. After John bought a magazine subscription costing £30 for the year from his birthday money, he had  $\frac{4}{7}$  left. How much did John receive for his birthday?

$$\frac{3}{7} = \text{£}30$$

$$\frac{1}{7} = \text{£}10$$

$$\frac{7}{7} = \text{£}70 \text{ birthday money received}$$

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8. Farmer Oats has 4 bags of sweetcorn and 4 extra sweetcorn. Each bag holds the same amount. Farmer Oats has 36 sweetcorn altogether. How many sweetcorn are in each bag?

$$36 - 4 = 32$$
$$32 \div 4 = 8$$

9. Mina's painting is 3 times longer than Stanley's painting. If Mina's painting is 72cm long, how long is Stanley's painting?

$$72\text{cm} \div 3 = 24\text{cm}$$

10. A small animal world uses 50kg of Guinea Pig and Rabbit feed a month combined. Last month, 25kg was spilt and couldn't be used. 3 months ago,  $\frac{2}{5}$  of a bag was mouldy and couldn't be used. How much feed was used in the last year?

$$12 \times 50\text{kg} = 600\text{kg}$$
$$600\text{kg} - 25\text{kg} = 575\text{kg}$$
$$1/5 \text{ of } 50\text{kg} = 10\text{kg. } 2/5 = 20\text{kg}$$
$$575\text{kg} - 20\text{kg} = 555\text{kg}$$

11. It is Grandad's birthday soon and he wants to hire a sports car for his present. A Ferrari costs £49.50 initial payment then £29.50 per hour. Grandad is bought 4 hours hire. How much did Grandad's present cost?

$$£49.50 + (£29.50 \times 4) = £167.50$$

12. Simplify  $4a + 3 = a + 24$

$$7 \times 4 + 3 = 31$$
$$7 + 24 = 31$$
$$31 = 31$$

13. Nathan sold 3 times as many cakes for his local Cub Scout group as Lauren. Finley sold twice as many cakes as Lauren. How many cakes did Nathan sell if they sold 36 cakes altogether?

$$\text{Nathan} = 18$$
$$\text{Lauren} = 6$$
$$\text{Finley} = 12$$

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14.  $6n + 4 = 34$ . What is  $n$ ?

$$34 - 4 = 30$$

$$30 \div 6 = 5$$

$$n = 5$$

15. Olivia has a container that when filled, holds 4 litres of water. She has some empty jugs that can contain  $\frac{2}{3}$  of a litre each. How many jugs can she completely fill?

12 thirds in total.

$$2 \text{ thirds} \times 6 = 12.$$

6 jugs.

16. What is 8% of £125?

10

17. A vet weighs a large dog and a kitten. The large dog weighs 9 times more than the kitten. Altogether they weigh 22.5kg. What does the dog weigh?

kitten is 2.25kg

$$\text{dog is } 2.25\text{kg} \times 9 = 20.25\text{kg}$$

$$20.25\text{kg} + 2.25\text{kg} = 22.5\text{kg}$$

18. Filip and his family were on a day out. He gave his two children  $\frac{3}{5}$  of his money. He gave his wife  $\frac{1}{2}$  of the remaining money. He had £100 left, so how much did he have to begin with?

His wife had £100 ( $\frac{1}{2}$  of  $\frac{2}{5}$  which is  $\frac{1}{5}$ )

$$\frac{2}{5} = \text{£}200$$

$$\frac{5}{5} = \text{£}500$$

19. Alisa is double the height of her brother, Samuel. Samuel is 3 times smaller than his Dad. His mum is 10cm taller than his Dad. How tall could Alisa be if the family's total height is 4 meters 78cm?

Alisa 104cm

Samuel 52cm Dad 156 cm

Mum 166 cm

20. Ninah and Chloe shared out £120 with the ratio of 3:5. How much did Chloe have?

$$8 \text{ parts. } 120 / 8 = \text{£}15$$

$$\text{Ninah} = \text{£}15 \times 3 = \text{£}45$$

$$\text{Chloe} = \text{£}15 \times 5 = \text{£}75$$

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21. There are 320 children in school today. They are divided into 2 groups. There are 60 more children in one group than the other. How many children are in each group?

$$130 + 190$$

22. There are 35 children in Elephant Class. Laurie says that 50% of the class are boys. Explain why she is wrong.

$$35 \div 2 = 17.5 \text{ children. You can't have 0.5 of a child.}$$

23. Oliver took a 450g cake out of its container. He ate  $\frac{2}{9}$  of the cake before returning the rest to the container. How much did he eat?

$$450 \div 9 = 50\text{g for } \frac{1}{9}$$
$$50\text{g} \times 2 = 100\text{g for } \frac{2}{9}$$

24. The price of petrol increased by 20%. It now costs £1.38 per litre. How much did it cost per litre before the increase?

$$100 \div 120 \times \text{now cost} = \text{£1.15}$$

25. The time is 12:55pm. If school started at 8:45am and finishes at 3:25pm. What fraction of the day remains?

$$6 \text{ hours } 40 \text{ minutes for a full day (400 mins).}$$
$$4 \text{ hours } 10 \text{ minutes have passed of the day (250 mins). } 2 \text{ and } \frac{1}{2} \text{ hours remain (150 mins).}$$
$$150 \text{ mins out of } 400 \text{ mins remain} = \frac{150}{400} = \frac{15}{40} = \frac{3}{8}$$