Answers - Multiplication and division problems

Year: Year 2

Answer to Question 1

a. There are 3 groups with 5 in each group. Count in 5s, one jump per group: 5, 10, 15. So **3 × 5 = 15**.
b. There are 4 groups with 3 in each group. Count in 3s: 3, 6, 9, 12. So **4 × 3 = 12**.
c. There are 6 groups with 2 in each group. Count in 2s: 2, 4, 6, 8, 10, 12. So **6 × 2 = 12**. Different groups can give the same total.

Answer to Question 2

a. 5 × 10 = **50 sweets**.
b. 30 ÷ 5 = **6 pencils** in each pot, because 6 × 5 = 30.
c. 8 × 2 = **16 children**.
d. 18 ÷ 2 = **9 boxes**, because 9 × 2 = 18.

Answer to Question 3

a. Sharing. 15 ÷ 3 = **5 apples** each.
b. Grouping. 15 ÷ 5 = **3 bags**.
c. Grouping. 20 ÷ 4 = **5 pots**.
d. Sharing. 20 ÷ 4 = **5 pens** in each pot.

Answer to Question 4

a. The whole bar is 18 and it is cut into 3 equal parts. Ask: what number added three times makes 18? 6 + 6 + 6 = 18, so each part is **6**: 18 ÷ 3 = 6.
b. The whole bar is 40, cut into 4 equal parts. 10 + 10 + 10 + 10 = 40, so each part is **10**: 40 ÷ 4 = 10.
c. Multiply the size of one part by the number of parts to get back to the whole: **3 × 6 = 18** and **4 × 10 = 40**. Multiplication is the inverse of division.

Answer to Question 5

a. 14 ÷ 2 = 7, so the missing number is **7**.
b. 40 ÷ 5 = 8, so the missing number is **8**.

c. $6 \times 5 = 30$, so the missing number is **30**.
d. $30 \div 3 = 10$, so the missing number is **10**.
e. $80 \div 10 = 8$, so the missing number is **8**.

Answer to Question 6

a. $4 \times 3 = 12$, **$12 \div 3 = 4$**, **$12 \div 4 = 3$**.
b. $6 \times 5 = 30$, **$30 \div 5 = 6$**, **$30 \div 6 = 5$**.
c. $9 \times 10 = 90$, **$90 \div 10 = 9$**, **$90 \div 9 = 10$**.

Answer to Question 7

a. $5 \times 6 =$ **30 eggs**.
b. $2 \times 6 =$ **12 eggs**.
c. $30 - 12 =$ **18 eggs**.
d. $18 \div 3 =$ **6 boxes**, because $6 \times 3 = 18$.

Answer to Question 8

a. $30 \div 5 =$ **6 sweets**, because $6 \times 5 = 30$.
b. $5 \times 2 =$ **10 sweets**.
c. $30 - 10 =$ **20 sweets**.
d. $30 \div 10 =$ **3 bags**.

Answer to Question 9

a. $40 \div 5 =$ **8 teams**.
b. $8 \times 2 =$ **16 balls**.
c. $24 \div 8 =$ **3 bibs** each, because $3 \times 8 = 24$.
d. $40 \div 10 = 4$, so **yes**, the coach is right.

Answer to Question 10

a. $12 \times 4 =$ **48 seats**.
b. $12 - 2 = 10$ rows for children. $10 \times 4 =$ **40 seats**.
c. There are 40 seats and 32 children. 40 is more than 32, so **yes**.
d. $40 - 32 =$ **8 empty seats**.

Answer to Question 11

a. 4 × 10 = **40 biscuits**.
b. 40 − 3 = **37 biscuits**.
c. 40 ÷ 5 = **8 biscuits** in each tin.
d. 5 × 10 = 50 and 40 is less than 50, so **yes**, there is room, with space for 10 more.

Answer to Question 12

a. There are 6 rows with 5 plants in each. Count in 5s six times: 5, 10, 15, 20, 25, 30. So 6 × 5 = **30** plants.
b. He plants 3 rows of 5 tomatoes: 3 × 5 = **15** tomato plants.
c. Add the two groups: 30 + 15 = **45** plants before the storm.
d. 7 plants are damaged: 45 − 7. Take 5 to get 40, then 2 more to get **38** undamaged plants.

Answer to Question 13

a. 9 × 2 = **18 shoes**.
b. 9 + 7 = **16 boxes**.
c. 16 − 4 + 10 = **22 boxes**.
d. 22 × 2 = **44 shoes**.

Answer to Question 14

a. Each page holds 10 stickers and there are 8 pages: 8 × 10 = **80** stickers. Multiplying by 10 moves the digit into the tens place.
b. 3 whole pages are full: 3 × 10 = **30** stickers already in the album.
c. Take the full spaces away from the total: 80 − 30 = **50** more stickers can fit.
d. He sticks in 25 of those 50 spaces: 50 − 25 = **25** empty spaces are left. That is exactly half of the free spaces.

Answer to Question 15

a. 4 × 5 = **20 teams**.
b. 20 × 4 = **80 children**.
c. 80 ÷ 5 = **16 races**.
d. 16 × 2 = **32 cones**.
e. 32 ÷ 10 is 3 with 2 left over. 3 packs hold 30 cones, which is not enough, so she needs **4 packs**.

Answer to Question 16

a. 6 × 5 = **30 carrots**.
b. 8 × 2 = **16 scoops**.
c. 4 × 10 = **40 pieces of hay**.
d. For 2 days: 30 × 2 = 60 carrots. 60 ÷ 10 = **6 bags**.
e. The guinea pigs eat 40 pieces and the rabbits eat 30 carrots. 40 is more than 30, so it is **true**.

Answer to Question 17

a. 30 × 2 = **60 sandwiches**.
b. 30 ÷ 6 = **5 packs**, because 5 × 6 = 30.
c. 30 × 5 = 150 grapes. 150 ÷ 50 = **3 bags**.
d. 4 × 10 = 40 cakes. 40 is more than 30, so **yes**.
e. 40 − 30 = **10 cakes** left over.

Answer to Question 18

a. 5 × 8 = **40 bricks**.
b. 4 × 10 = **40 bricks**.
c. 40 + 40 = **80 bricks**.
d. 80 ÷ 20 = **4 boxes**, because 4 × 20 = 80.
e. Both walls have 40 bricks. **Neither** wall has more, so the difference is 0.

Answer to Question 19

a. 4 × 5 = **20 swimmers**.
b. 3 × 20 = **60 swimmers**.
c. 60 ÷ 10 = **6 packs**.
d. 3 × 2 = **6 lifeguards**.
e. 6 × 3 = **18 bottles**.

Answer to Question 20

a. Work backwards. 28 − 3 = 25 and 25 ÷ 5 = 5. The number is **5**. Check: 5 × 5 = 25 and 25 + 3 = 28.
b. Try pairs that multiply to 24: 1 × 24, 2 × 12, 3 × 8 and 4 × 6. Only 4 + 6 = 10. The numbers are **4 and 6**.
c. 20 ÷ 6 is 3 with 2 left over (3 × 6 = 18). The sweets cannot be shared equally, so Sam is **not right**.

d. For example: "There are 4 plates with 5 biscuits on each plate. How many biscuits?" $4 \times 5 = 20$. "20 biscuits are shared between 4 plates. How many on each plate?" $20 \div 4 = 5$.