Answers - Multiplication and division: groups, doubling and sharing

Year: Year 1

Answer to Question 1

a. 3 groups of 2: 2, 4, 6. There are **6**.
b. 4 groups of 5: 5, 10, 15, 20. There are **20**.
c. 2 groups of 10: 10, 20. There are **20**.

Answer to Question 2

a. There are 3 groups with 3 in each group. Add one 3 for each group: 3 + 3 + 3 = **9**.
b. There are 2 groups with 4 in each group: 4 + 4 = **8**. This is also double 4.
c. There are 5 groups of 2. Count in 2s, one jump for each group: 2, 4, 6, 8, 10. So 2 + 2 + 2 + 2 + 2 = **10**.

Answer to Question 3

a. Double 3 = 3 + 3 = **6**.
b. Double 5 = 5 + 5 = **10**.
c. Double 7 = 7 + 7 = **14**.
d. Double 8 = 8 + 8 = **16**.
e. Double 10 = 10 + 10 = **20**.

Answer to Question 4

a. Half of 6 = **3**, because 3 + 3 = 6.
b. Half of 10 = **5**, because 5 + 5 = 10.
c. Half of 14 = **7**, because 7 + 7 = 14.
d. Half of 16 = **8**, because 8 + 8 = 16.
e. Half of 20 = **10**, because 10 + 10 = 20.

Answer to Question 5

a. The numbers go up in 2s. After 6 comes **8**, and after 10 comes **12**.
b. The numbers go up in 5s. After 10 comes **15**, and after 25 comes **30**.
c. The numbers go up in 10s, so only the tens digit changes. After 20 comes **30**, and

after 40 comes **50**.
d. Count on in 2s from 10: 10, 12, **14**, 16. The missing number is 14.
e. Counting back in 5s, each number is 5 less: 30, 25, **20**, 15. The missing number is 20.

Answer to Question 6

a. Count the lines of dots going across: there are **3** rows.
b. Count the dots in one row: there are **4** dots, and every row is the same.
c. Count in 4s, one jump for each row: 4, 8, 12. There are **12** dots in all.
d. Now there are 4 rows of 3. Count in 3s: 3, 6, 9, 12. It is still **12** dots: turning the array does not change how many dots there are.

Answer to Question 7

a. $6 \div 2 =$ **3** on each plate. Check: $3 + 3 = 6$.
b. $8 \div 4 =$ **2** on each plate. Check: $2 + 2 + 2 + 2 = 8$.
c. $10 \div 5 =$ **2** on each plate. Check: $2 \times 5 = 10$.
d. $15 \div 3 =$ **5** on each plate. Check: $5 + 5 + 5 = 15$.

Answer to Question 8

a. Each box holds 6 eggs and there are 2 boxes: $6 + 6 =$ **12** eggs. This is double 6.
b. Add one more 6 for the third box: 6, 12, 18. There are **18** eggs in all 3 boxes.
c. The first two boxes hold 12 eggs. Half of 12 means 2 equal groups of 6, so she gives **6** eggs to the neighbour.
d. She keeps the other half: $12 - 6 =$ **6** eggs.

Answer to Question 9

a. 2, 4, 6, 8, 10. **10** hands.
b. Count in 5s ten times: 5, 10, ... 50. There are **50** fingers.
c. There are **10** feet (the same as hands).
d. 10 feet with 5 toes each: 5, 10, ... 50. **50** toes.

Answer to Question 10

a. Share 12 sweets between 2 children, one at a time, until none are left. Each child gets **6** sweets, because $6 + 6 = 12$.
b. Share 12 between 3 children: each child gets **4**, because $4 + 4 + 4 = 12$.
c. Share 12 between 4 children: each child gets **3**, because $3 + 3 + 3 + 3 = 12$.

d. Each child got 6, then 4, then 3. **The more children share, the fewer sweets each child gets**, because the same 12 sweets are split into more groups.

Answer to Question 11

a. Half of 20 is **10** in each team.
b. 5, 10, 15, 20 gives **4** teams.
c. Teams of 10: 2 teams. Teams of 5: 4 teams. Teams of **5** give more teams.
d. Double 3 is 6. The second team scores **6** goals.

Answer to Question 12

a. There are 4 tanks of 5 fish. Count in 5s, one jump for each tank: 5, 10, 15, 20. There are **20** fish.
b. There are 3 cages of 2 hamsters. Count in 2s: 2, 4, 6. There are **6** hamsters.
c. Add the fish and the hamsters: 20 + 6 = **26** animals.
d. Half of 6 means 2 equal groups of 3, so the shop sells **3** hamsters and 3 are left.

Answer to Question 13

a. Max buys 4 packs of 2. Count in 2s: 2, 4, 6, 8. Max buys **8** sandwiches.
b. His friends buy 6 packs of 2. Count in 2s six times: 2, 4, 6, 8, 10, 12. They buy **12** sandwiches.
c. Add the two amounts: 8 + 12 = **20** sandwiches in all.
d. Half of 20 means 2 equal groups of 10, because 10 + 10 = 20. So **10** sandwiches go to the school trip.

Answer to Question 14

a. Each child has 2 shoes and there are 7 children. Count in 2s seven times: 2, 4, 6, 8, 10, 12, 14. There are **14** shoes.
b. 3 more children bring 2 shoes each: 2, 4, 6. That is **6** more shoes (double 3).
c. Add the new shoes: 14 + 6 = **20** shoes altogether.
d. Half of 20 is 10, because 10 + 10 = 20. So **10** shoes are black.

Answer to Question 15

a. 5, 10, 15, 20. She needs **20** slices.
b. 20 is more than 15. **Yes, he is right.**
c. 10, 20. She needs **2** packs.
d. 2 packs hold 20 slices, and she needs 20. **0** are left over.

Answer to Question 16

a. Half of 16 is **8**, because 8 + 8 = 16.
b. 16 − 8 = **8** stickers.
c. 4 + 8 = **12** stickers.
d. 8 + 12 = **20** stickers. Check: 16 + 4 = 20.

Answer to Question 17

a. 4 groups of 2: 2, 4, 6, 8. The answer is 8. **Wrong**.
b. 7 + 7 = 14. **Right**.
c. 9 + 9 = 18, so half of 18 is 9. **Wrong**.
d. 5, 10, 15. **Right**.

Answer to Question 18

a. 2, 4, 6, 8, 10. **10** plants in one bed.
b. 10, 20, 30, 40. **40** plants.
c. 40 is more than 30. **Yes, she is right.**
d. Half of 40 is **20** flowers.

Answer to Question 19

a. Double 4 is **8**.
b. Double 8 is **16**.
c. Saturday has 32 seeds, which is more than 20. **Saturday**.
d. 1 + 2 + 4 + 8 = **15** seeds.

Answer to Question 20

a. 12 ÷ 2 = **6** groups.
b. 12 ÷ 3 = **4** groups.
c. 12 ÷ 4 = **3** groups.
d. 5, 10, 15 jumps over 12. Two groups of 5 use 10, so 2 are left over. **No**.