

31. How to use brackets and indices in calculations



Scenario Questions:

1. The heights of two basketball players are 6 feet and 7 feet, what number do you get if you square the sum of their heights?

2. A store sells t-shirts for £10 each, and hats for £5 each. If you buy 3 t-shirts and 2 hats, what value do you get if you square the total cost of all the items?

3. A farmer has 2 fields, one with 4 cows and the other with 3 cows. If the daily milk production per cow is 5 litres, and 5 litres is spilt collectively. How much milk is produced per day overall?

4. The recommended number of potatoes when cooking a roast is 2 per person plus the square root of the total guests. How many potatoes do you need for 4 people?

5. A car rental company charges £20 per day for an estate and £30 per day for an SUV. What would be the difference in the cost if you hired a car for a week?

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Scenario Questions:

6. A construction company orders 8 tons of cement for a building project. If the project uses 1.5 tons a day, how much cement is left after 4 days.

7. A restaurant has a promotional discount of 10%. If the original bill is £100 how much will you pay if 12.5% service charges is added after the discount?

8. A student has to solve $2^2 + 1^3 + 4^4$ maths problems. If the student then divides his answer by 2, what does he get?

9. A company is selling products at a discount of buy two get a third product for half price. If a customer buys 9 products priced at £80. How much do they spend?

10. If the area of a square is given by side length squared. What is the area of the grass in a square garden with side length 8 meters if it has a square pond in the middle with side length 2 meters.?

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Scenario Questions: **Answers**

1. The heights of two basketball players are 6 feet and 7 feet, what number do you get if you square the sum of their heights?

1. £169

2. A store sells t-shirts for £10 each, and hats for £5 each. If you buy 3 t-shirts and 2 hats, what is the total cost for the items squared?

2. £1600

3. A farmer has 2 fields, one with 4 cows and the other with 3 cows. If the daily milk production per cow is 5 litres, and 5 litres is spilt collectively. How much milk is produced per day overall?

3. 30 litres

4. The recommended number of potatoes when cooking a roast is 2 per person plus the square root of the total guests. How many potatoes do you need for 4 people?

4. 10

5. A car rental company charges £20 per day for an estate and £30 per day for an SUV. What would be the difference in the cost if you hired a car for a week?

5. £70

6. A construction company orders 8 tons of cement for a building project. If the project uses 1.5 tons a day, how much cement is left after 4 days.

6. 2 tons

7. A restaurant has a promotional discount of 10%. If the original bill is £100 how much will you pay if 12.5% service charges is added after the discount?

7. £101.25

8. A student has to solve $2^2 + 1^3 + 4^4$ math problems. If the student then divides his answer by 2, what does he get?

8. 130.5

9. A company is selling products at a discount of buy two get a third product for half price. If a customer buys 9 products priced at £80. How much do they spend?

9. £600

10. If the area of a square is given by side length squared. What is the area of the grass square garden with side length 8 meters if there is a square pond in the middle with side length 2 meters.?

10. 60 meters squared