CLASS 7 MATHS · 2026-27

Percentage, profit and loss

Comparing quantities

31 QUESTIONS | **30** MINUTES | **3** EXERCISES

This belongs to ______________________ **Date** ______________

WHAT YOU'LL GET GOOD AT

- Converts fluently between fractions, decimals and percentages
- Finds a percentage of a quantity without a formula
- Calculates profit or loss percent on the cost price
- Works backwards from selling price to cost price
- States what each percentage is a percentage of

Take your time, and have a go at every one. If you get stuck, look at the orange box — Ollie has already done one for you.

Percentage, profit and loss

Comparing quantities · 31 questions · tick each box as you finish

Exercise 1 of 3 · 11 questions **Convert or calculate.**

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

12% of 500 = 60. Percent means 'out of a hundred', so 12% is 12/100, and 12/100 of 500 is 60. A child who reads every percentage as a fraction out of a hundred rarely needs a formula for anything in this chapter - the formula is what people fall back on when the meaning was never clear.

1) 25% as a fraction in lowest terms

2) 3/5 as a percentage

3) 0.35 as a percentage

4) 12% of 500

5) 40% of 250

6) 15% of 80

7) 7/20 as a percentage

8) 0.125 as a percentage

9) 18% of 350

10) 22% of 150

11) 35% of 240

Exercise 2 of 3 · 10 questions **Find the profit or loss, and the profit or loss percent.**

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

CP ₹400, SP ₹460. The profit is 460 - 400 = ₹60. Profit percent is the profit as a fraction of the cost price: 60/400 × 100 = 15%. Always the cost price, never the selling price - dividing by 460 here would give about 13%, which looks perfectly plausible and is wrong. If your child can say what the percentage is of before dividing, this chapter is largely done.

1) Cost price ₹400, selling price ₹460

2) Cost price ₹250, selling price ₹200

3) Cost price ₹1,200, selling price ₹1,500

4) Cost price ₹800, selling price ₹720

5) Cost price ₹60, selling price ₹75

6) Cost price ₹500, selling price ₹575

7) Cost price ₹900, selling price ₹720

8) Cost price ₹150, selling price ₹180

9) Cost price ₹2,000, selling price ₹2,500

10) Cost price ₹640, selling price ₹560

Exercise 3 of 3 · 10 questions Work these out. Show the working.

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

The shirt: a 20% discount means the customer pays 80% of the marked price, so 80% of the marked price is ₹800 and the marked price is 800 × 100 ÷ 80 = ₹1,000. The mistake this question catches is adding 20% of 800 back on, which gives ₹960 - wrong, because the 20% was of the marked price, not of what was paid. Working-backwards questions are the ones worth slowing down on.

1) A shopkeeper buys a cycle for ₹2,400 and sells it at a profit of 15%. What is the selling price?

2) A book bought for ₹250 is sold for ₹225. What is the loss percent?

3) 20% of a class of 45 students were absent. How many were present?

4) A shirt costs ₹800 after a 20% discount on its marked price. What was the marked price?

5) A trader sells a watch for ₹1,140 at a loss of 5%. What was the cost price?

6) A bag is sold for ₹900 at a profit of 25%. What was the cost price?

7) After a 15% discount a jacket costs ₹1,275. What was the marked price?

8) A phone bought for ₹9,000 is sold at a loss of 8%. What is the selling price?

9) 35% of a school's 640 students walk to school. How many do not?

10) A price rises from ₹250 to ₹300. By what percentage did it rise?

All done? How did that feel?

Colour in a star. Three stars means you could teach it to someone else.

☆ ☆ ☆ Tricky · Getting there · Easy now

Answer key

For grown-ups

Percentage, profit and loss · keep this page back until your child has finished.

1. Convert or calculate.

1) 1/4. 25/100 simplifies by 25.
2) 60%. 3/5 = 60/100.
3) 35%. Multiply by 100.
4) 60. 12/100 × 500 = 60.
5) 100. 40/100 × 250 = 100.
6) 12. 15/100 × 80 = 12.
7) 35%. 7/20 = 35/100.
8) 12.5%. Multiply by 100.
9) 63. 18/100 × 350 = 63.
10) 33. 22/100 × 150 = 33.
11) 84. 35/100 × 240 = 84.

2. Find the profit or loss, and the profit or loss percent.

1) Profit ₹60. Profit percent = 60/400 × 100 = 15%.
2) Loss ₹50. Loss percent = 50/250 × 100 = 20%.
3) Profit ₹300. Profit percent = 300/1200 × 100 = 25%.
4) Loss ₹80. Loss percent = 80/800 × 100 = 10%.
5) Profit ₹15. Profit percent = 15/60 × 100 = 25%.
6) Profit ₹75. Profit percent = 75/500 × 100 = 15%.
7) Loss ₹180. Loss percent = 180/900 × 100 = 20%.
8) Profit ₹30. Profit percent = 30/150 × 100 = 20%.
9) Profit ₹500. Profit percent = 500/2000 × 100 = 25%.
10) Loss ₹80. Loss percent = 80/640 × 100 = 12.5%.

3. Work these out. Show the working.

1) Profit = 15% of 2400 = ₹360, so the selling price is 2400 + 360 = ₹2,760.

2) Loss = 250 - 225 = ₹25. Loss percent = 25/250 × 100 = 10%.

3) Absent = 20% of 45 = 9, so 45 - 9 = 36 students were present.

4) After a 20% discount the price is 80% of the marked price, so 80% of MP = 800, giving MP = 800 × 100 ÷ 80 = ₹1,000.

5) A 5% loss means the selling price is 95% of the cost price, so 95% of CP = 1140, giving CP = 1140 × 100 ÷ 95 = ₹1,200.

6) A 25% profit means the selling price is 125% of the cost price, so CP = 900 × 100 ÷ 125 = ₹720.

7) After a 15% discount the price is 85% of the marked price, so MP = 1275 × 100 ÷ 85 = ₹1,500.

8) Loss = 8% of 9000 = ₹720, so the selling price is 9000 - 720 = ₹8,280.

9) 35% of 640 = 224 walk, so 640 - 224 = 416 do not.

10) Rise = ₹50. Percentage rise = 50/250 × 100 = 20%.

WHILE YOUR CHILD WORKS

- One question fixes most errors here: 'a percentage of what?' Profit percent is of the cost price. Discount is of the marked price.
- Working backwards is where marks are actually lost. If the sheet runs long, skip a conversion question rather than one of the last two.
- Check the answer is sensible. A profit that makes the selling price lower than the cost price means something has been divided the wrong way round.