

Boost Free Lessons - Year 8 Maths

Lesson 12: Percentage Increase and Decrease

Name: _____ Grade: _____ Date: _____

Worked Example 1

Increase \$60 by 15%.

1. Find 15% of 60 first. 10% of 60 = 6, and 5% is half of that, so 5% = 3.
2. $15\% = 6 + 3 = 9$.
3. Increase means add it on: $60 + 9 = 69$.
4. In one step you could find 115% of 60, since $1.15 \times 60 = 69$.

= \$69

Worked Example 2

A price falls from \$80 to \$68. Find the percentage decrease.

1. Find the actual decrease first: $80 - 68 = 12$.
2. Write that as a fraction of the **original** amount, not the new one: $\frac{12}{80}$.
3. Multiply by 100 to turn it into a percentage: $\frac{12}{80} \times 100 = 15$.

= 15% decrease

Remember: Percentage change is always compared with the **original** amount, never the new one. Increase means add the change on, decrease means take it off.



Question 1: Find the following.

1. Increase 40 by 10%

2. Increase 200 by 25%

3. Decrease 90 by 20%

4. Decrease 150 by 10%

5. Increase \$75 by 20%

6. Decrease \$60 by 50%

7. Increase 500 by 8%

8. Decrease 250 by 40%



Question 2: Find the percentage increase or decrease in each case.

1. From 50 to 60

2. From 80 to 60

3. From 20 to 25

4. From 200 to 170

5. From \$40 to \$50

6. From 90 to 45

7. From 120 to 150

8. From \$250 to \$200



Question 3: Answer the following questions.

1. A \$250 phone is discounted by 30%, then 10% GST is added to the sale price. Find the final price.
2. A shirt is bought for \$40 and sold for \$52. Find the percentage profit.
3. A town's population grows from 8 000 to 9 200. Find the percentage increase.
4. A car worth \$30 000 loses 20% of its value in one year. What is it worth after that year?
5. A price is increased by 10% and then decreased by 10%. Is it back to the original price? Explain using \$100 as an example.





Every student has gaps. The hard part is knowing exactly where they are.
That is what a Boost assessment is for.

Book a Free Assessment

Normally valued at \$199, free for new families

- A friendly skills check aligned to the NSW syllabus
- Face to face with our qualified tutors
- A clear picture of your child's strengths and gaps
- A weekly plan built around what they actually need

Book a Free Assessment →

boosttutoring.com.au/contact



Answers: Percentage Increase and Decrease**Question 1**

- | | |
|--------|---------|
| 1. 44 | 5. \$90 |
| 2. 250 | 6. \$30 |
| 3. 72 | 7. 540 |
| 4. 135 | 8. 150 |

Question 2

- | | |
|-----------------|-----------------|
| 1. 20% increase | 5. 25% increase |
| 2. 25% decrease | 6. 50% decrease |
| 3. 25% increase | 7. 25% increase |
| 4. 15% decrease | 8. 20% decrease |

Question 3

1. \$192.50
2. 30% profit
3. 15% increase
4. \$24 000
5. No. \$100 increased by 10% is \$110, and 10% of \$110 is \$11, so it falls to \$99. The decrease is worked out on the larger amount.

