

Percent OFF

- * Discounts
- Clearance
- * Sale ^(off)
- Grand Openings
- Mark-downs
- Deals

Percent ADDED ON

- Mark-up
- Cash Back (% & \$ Back)
- Interest — credit cards
 - ↳ Loans
 - ↳ investments
- Sales tax
- TIP

Taking % off and adding % on

Use a model to solve each of the following multi-step problems. Then write a number sentence that reflects your model and answer (or show a way to solve it with another method).

1. Larry has a piece of rope that's 12 feet long.

He cuts ~~25%~~ 25% of the rope off. How long is the rope now?

Shorter

100% = 25%
+ 25%
+ 25%
+ 25%

25% 25% 25% 25%

12 ft = 100%

12 ÷ 4 = 3

9 ft. → 75% of orig.

Larry's Rope
12 ft = 100%

- Joe has a rope that is 25% longer than Larry's 12-foot long rope. How long is Joe's rope?

15 ft

25% 25% 25% 25%

3 ft 3 ft 3 ft 3 ft + 3 ft = 15 ft

12 ft Larry's

125% of orig.

2. Lydia invested \$150

Lydia earned 10% on her investment. How much money does she have now?

10% → \$15

+ 100% → \$150

\$165 → 110% of orig.

110% \$165

How much money would Lydia have if she lost 10% on her investment?

150 - 10% → 15

- 15 → 10%

\$135 (90% of orig.)

3. A refrigerator costs \$1200 wholesale. If the mark-up on the refrigerator is 20%, what is the new price?

20% → 1200(.2) = 240

+ 100% → 1200

1440

part 1 1200 240 1440

% 100% 20% (20%)

4. Rico's resting heart rate is 50 beats per minute. His target exercise rate is 150% of his resting rate. What is his target rate?

50 = 100%

25 50%

2 50

50 + 25 = 75

5. Sam bought a new set of headphones from Skullcandy. The headphones were \$18.95 but then there was a 6% sales tax. How much did Sam end up spending on the headphones?

\$18.95 .1895 1.14 + 18.95 = 20.09

100% 1% 6%