

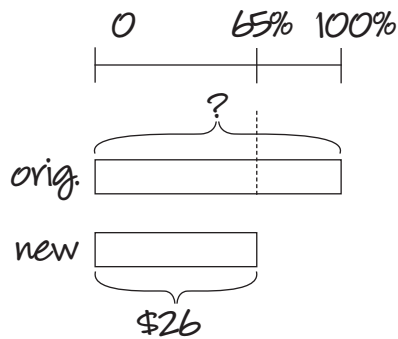
What to bring to class:
 Ask students to bring PM
 4A and 5A.

7.3 Solving Percent problems by the Unitary Method

"Unitary Method" = Find the whole

Ex 1 The price of a shirt was marked down 35% to \$26. What was the original price?

Start ⇒
 by drawing
 100% scale



<u>Percent</u>	\$
65% →	\$26
÷13	
5% →	\$2
×20	
100% →	<u>\$40</u>

original price is \$40.

[Instructors: Set up as

65%	→	③	\$26
100%	→	②	\$__

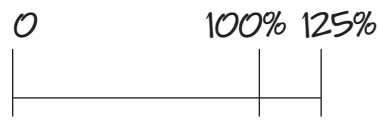
start here ①

Then fill in the middle]

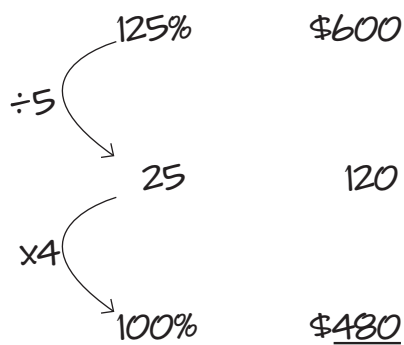
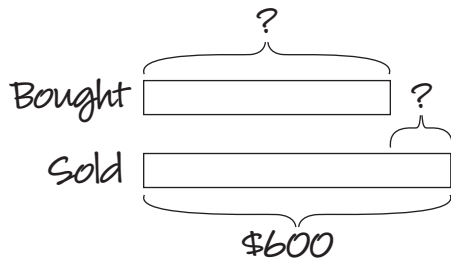


Ex 2 A salesman sold 2 TV's at \$600 each. The 1st was sold at a 25% profit and the 2nd was sold at a 25% loss. Find his Net profit or loss.

a) Profit on 1st TV.



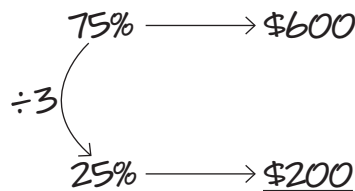
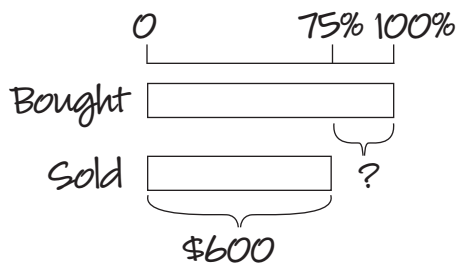
[← Scale 1st!]



Profit $\$600 - 480 = \120 .

Profit is \$120 on 1st TV.

b) Loss on 2nd TV

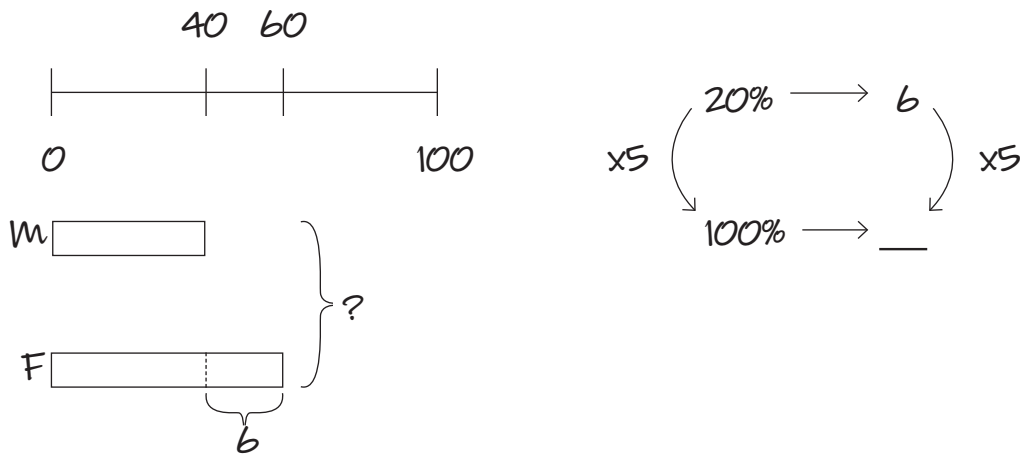


Loss was \$200.

c) Net loss $\$200 - \$120 = \$80$

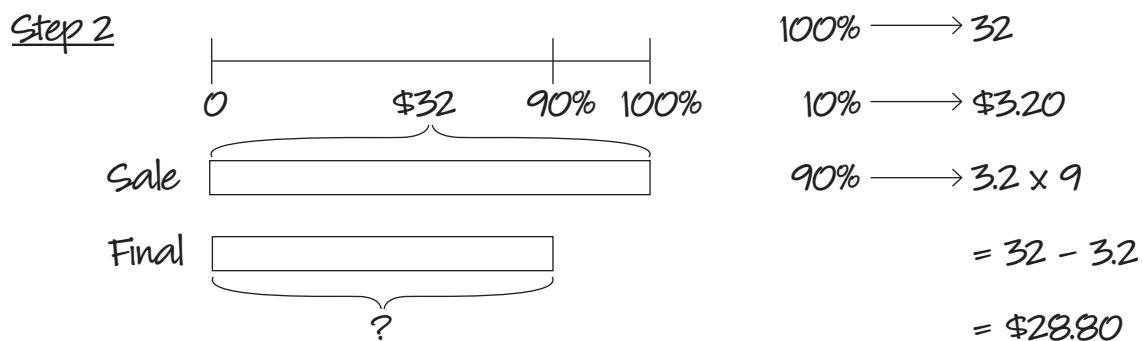
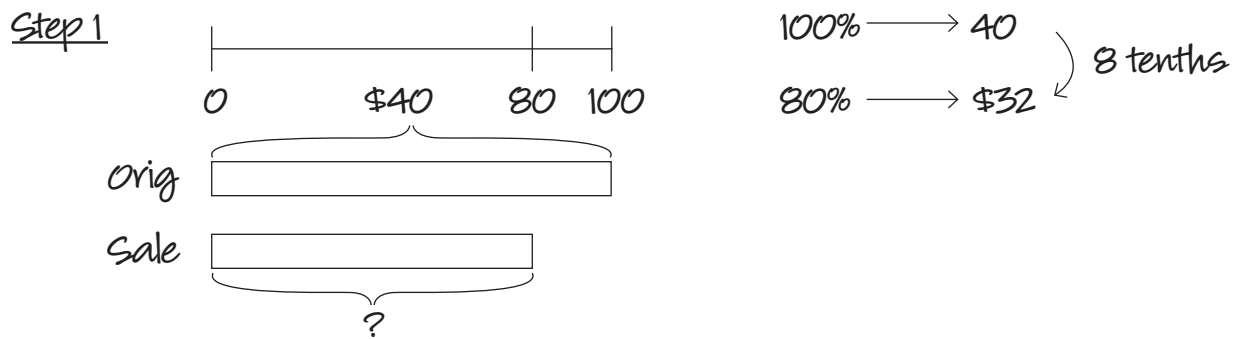
Moral: Equal percents (25% profit/ 25% loss) do not mean equal amounts - percents of different things!

Ex 3 [Students do] In a class, 40% of the students are male. There are 6 more female students than male. How many students are in the class?



there are 30 altogether

Ex 4 "Multi-step" A \$40 shirt was reduced 20% in a sale. Later the sales price was reduced 10%. What was the price then? [Students try first]



Final cost was \$28.80

Moral

Price reductions don't add!

$$\$40 \xrightarrow{-20\% \text{ off}} \$32 \xrightarrow{-10\% \text{ off}} \$28.80$$

$$\$40 \xrightarrow{-30\% \text{ off}} \$28.00$$

10% off a different amount!

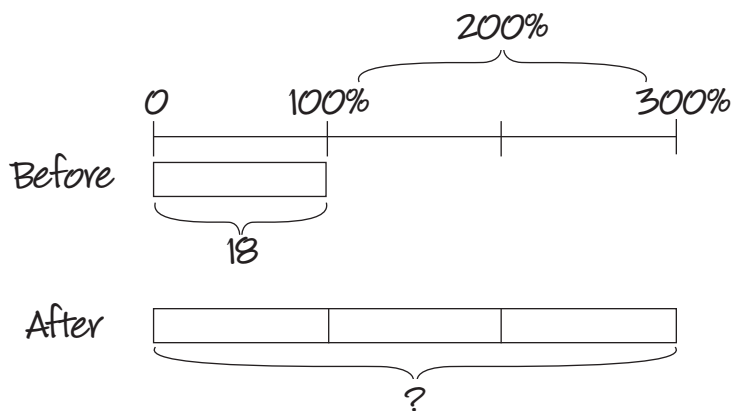
Caution on Percents

- ① Price of \$100 stereo was increased by 10%, then reduced by 10%

$$\$100 \xrightarrow{10\% \text{ inc.}} \$110 \xrightarrow{10\% \text{ off}} \$99$$

Not original Price!

- ② An \$18 Stock increased 200%



Stock rose $3 \times 18 = \$54$.

Increase 200% \neq double!

In general, % problems are easy if you keep track of what 100% (or the whole amount) means.

If time: Do problems 6 (tricky), 7, 8, 9, 10 of Practice 4E.

HW Read § 7.3 do HW set 32.