

## STEP 1: FDP EQUIVALENCE

Percentages	Fractions	Decimals
32%	$\frac{32}{100} = \frac{8}{25}$	0.32
60%	$\frac{6}{10} = \frac{3}{5}$	0.6
37.5%	$\frac{3}{8}$	0.375
17%	$\frac{17}{100}$	0.17
0.5%	$\frac{5}{1000}$	0.005
2.3%	$\frac{23}{1000}$	0.023

## STEP 2: CALCULATE PERCENTAGE INCREASE & DECREASE

Increase \$720 by 12%

$$720 \times 1.12$$

$$806.4$$

Decrease \$600 by 35%

$$600 \times 0.65$$

$$390$$

To increase by 62.5% you multiply by 1.625

To decrease by 62.5% you multiply by 0.375

A car is \$7500. The price is increased by 20% then decreased by 32%. What is the new price?

$$7500 \times 1.2 = 9000$$

$$9000 \times 0.68 = 6120$$

## STEP 3: PERCENTAGE CHANGE

Find the % change:

1) \$578 → \$705

$$\frac{705 - 578}{578} \times 100 = 21.97\%$$

2) 12kg → 8kg

$$\frac{8 - 12}{12} \times 100 = -33.3\%$$

3) 120g → 720g

$$\frac{720 - 120}{120} \times 100 = 500\%$$

$\frac{\text{Change}}{\text{orig}} \times 100$

## STEP 4: REVERSE PERCENTAGE

1) 30% = 36

1% = 1.2

100% = 120

2) 7.5% = 240,000

1% = 32,000

100% = 3,200,000

Jeff has 68 books. This 70% more than last year. How many did he have last year?

170% = 68

1% = 0.4

100% = 40