Hard Percent Problems #1

INSTRUCTION

Percent problems can be solved by 1st setting them up as two equal ratios with one part missing like this-

$$\frac{part}{whole} = \frac{\%}{100}$$

The whole will be found right after the word "of".

Example 1- The "whole" is missing.- 25% of ___ = 40

"OF" comes before the whole, so the whole is missing.

Always use this setup $- \quad \frac{part}{whole} = \frac{\%}{100}$

Fill in the parts you know, the part and the percent- $\frac{40}{whole} = \frac{25\%}{100}$

To solve, *multiply the numbers across from each other up and down*

then *divide by the other number.*

Multiply the numbers across from each other up and down $- \frac{40 \quad 25\%}{whole \quad 100}$ 40 x 100 (4000)

Divide by the other number $- 25$ $\frac{40 \quad 25\%}{whole \quad 100}$ 4000/25 = 160   So, 25% of **160** = 40

Example 2- The "percent" is missing-   ___% of 700 = 210

It's easy to see the percent is missing, but which number (700 or 210) is the part and which number is the whole?

That's easy too because the word "of" comes right before the whole. So 700 is the whole.

$\frac{part}{whole} = \frac{\%}{100}$ $\frac{210}{700} = \frac{\%}{100}$ $\frac{210 \quad \%}{700 \quad 100}$ Multiply 210 x 100 (21000), then divide by 700, answer (30).

So, **30 %** of 700 = 210 .

1) 60% of _____ = 75

2) 5% of ___ = 6

3) 31% of _____ = 620

4) ___% of 700 = 210

5) ___% of 400 = 20

6) ___% of 250 = 100

7) 14% of 50 = _____

8) 3 % of 7500 = _____

9) 22% of 675 = _____

10) ___% of 1500 = 30

11) 5 % of _____ = 45

12) ___% of 550 = 110

13) ___% of 200 = 6

14) 25% of 800 = _____

15) 15% of _____ = 72

16) A TV that normally costs $400 is on sale for 35% off. How much will you save if you buy it on sale?

17) 60% of Floridians voted for Obama. If Obama received 3 million votes, how many Floridians voted?

18) There are 500 people in our school. 40 study online. What percent study online?

19) Every payday, Chitragupta sets aside 15% for a rainy day. His rainy day account now has $ 600.
.   How much has his total pay been?

20) I bought a flash drive for $25. Tax was 4%. How much was the tax?

21) I asked 32 people if they liked Brittany Spears. 8 said no. What percent do not like Brittany?

22) Carlos earned $450 commission. His commission is 20% of his sales. What was his sales total?

23) John is getting a 3% raise. How much will his raise be if he makes $ 4300 a month now?

24) Sally got a $ 84 raise. She used to make $ 4200 a month. What percent raise did she get?

25) Aesha got a 4% raise and she makes $ 75 a month more now. How much did she used to get?

1) 60% of **125** = 75

2) 5% of **120** = 6

3) 31% of **2000** = 620

4) **30** % of 700 = 210

5) **5** % of 400 = 20

6) **40** % of 250 = 100

7) 14% of 50 = **7**

8) 3 % of 7500 = **225**

9) 22% of 675 = **148.5**

10) **2** % of 1500 = 30

11) 5 % of **900** = 45

12) **20** % of 550 = 110

13) **3** % of 200 = 6

14) 25% of 800 = **200**

15) 15% of **480** = 72

16) A TV that normally costs $400 is on sale for 35% off. How much will you save -- **$ 140**

17) 60% of Floridians voted for Obama. If Obama received 3 million votes--- **5 million voted**

18) There are 500 people in our school. 40 study online. What percent study online? **8 % study online**

19) Every payday, Chitragupta sets aside 15% for a rainy day. His rainy day account now has $ 600. How much has his total pay been? **$ 4000**

20) I bought a flash drive for $25. Tax was 4%. How much was the tax? The tax was **$ 1**

21) I asked 32 people if they liked Brittany Spears. 8 said no. **25** percent do not like Brittany.

22) Carlos earned $450 commission. His commission is 20% of his sales. His sales total was **$ 2250** .

23) John is getting a 3% raise. How much will his raise be if he makes $ 4300 a month now? **$ 129**

24) Sally got a $ 84 raise. She used to make $ 4200 a month. What percent raise did she get? **2 %**

25) Aesha got a 4% raise and she makes $ 75 a month more now. She used to get **$ 1875** a month.