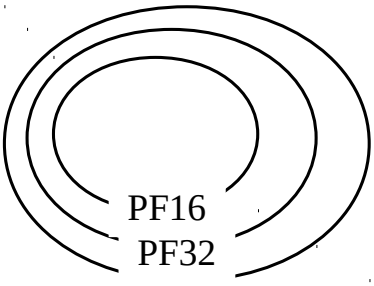
Math 4 Homework #5

Solve in this handout:

1. Finish the Venn diagram for prime factors of the following numbers:
16, 32, 64, 128, 256.



2. Using prime factorization find LCM and GCD of …

a). … 24 and 60

24 = _____

60 = _____

b). … 48 and 36

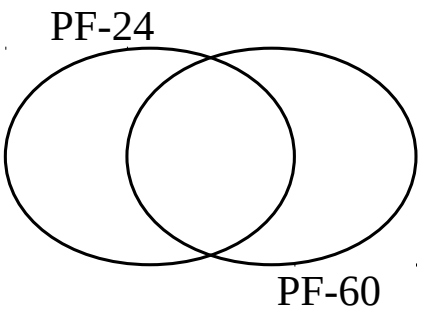
36 = _____

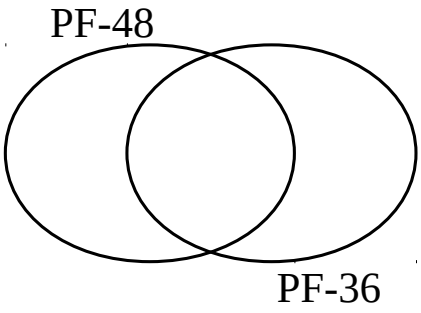
48 = _____

c). … 176 and 528

176 = _____

258 = _____





LCM(24,60) = _____

GCF(24,60) = _____

LCM(48,36) = _____

GCF(48,36) = _____

3. Consider the number **W** = 5 · 5 · 2 · 2 · 2 · 7 · 11.
Without calculations explain whether **W** is a multiple of 10.

_____

Is **W** a multiple of 100? _____

Is it a multiple of 1000? _____

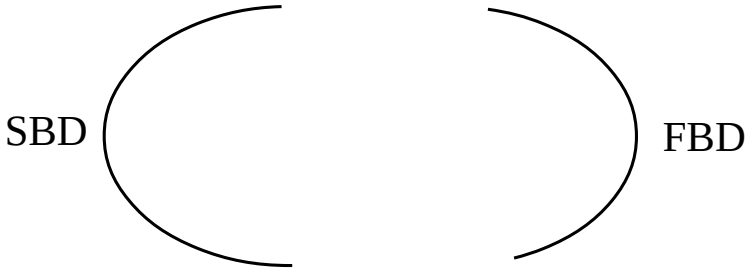
How many zeros does **W** have at the end? _____

4. Ages of Amanda, Sara, and Carly are prime numbers. Carly's age is the sum of ages of Sara and Amanda. Amanda is the youngest. How old is Amanda?

_____

_____

5.* Use Venn diagram to solve the word problem:
In a some remote village many years ago villages successfully bred dragons. In a flock of 67 dragons one dragon breeder counted 48 Fire-Breathing Dragons, and another dragon breeder counted 47 Steam-Breathing dragons. Both swore there was no mistake.



Solve in your notebook.

6. In the following puzzle each letter stands for a digit:
IT × AT = 2001
Find IT and AT. [Hint: 2001 is divisible by 23.]

7. In some school, every lesson is 45 minutes long, with three minute break between lessons. The first lesson starts at 8:00am. When will be the next lesson that starts on an hour sharp (*i.e.* at some hour and 00 minutes)?

8. Plot points $\boldsymbol{A}(6,5)$ and $\boldsymbol{B}(-3,-1)$ in Cartesian coordinates.
A. Mark point $\boldsymbol{C}(3, \boldsymbol{y}) \in \boldsymbol{AB}$ to find $\boldsymbol{y}$.
B. Point $\boldsymbol{D}(\boldsymbol{x}, 7) \in \boldsymbol{AB}$. Find $\boldsymbol{x}$.

9** Do you remember the problem about two players playing with a clock trying to move to 6? How will the problem change if there are 3 players?