Formulas

The formulas below are ones used this year and may be used again the following years.

Percent of an increase or decrease:

- New number − - old number / - old number - x 100 = - Answer	Excel Formula: =sum((a2-a1)/a1) Either add *100 to the end or format the column or cell to turn the number into a percentage.

Weighted average (used for adding two web site views):

- (1st site) # views x avg. time viewed (or avg. % viewed)
- +
- (2nd site) # views x avg. time viewed (or avg. % viewed)
- /
- Total # of views
- =
- Answer

Shifting collection:

- Add up the total number of inches per section (e.g. the F's had 1,572" of books)
- Divide by the number of inches to use on shelf (e.g. 26")
- This gives us the total number of shelves needed per call number.
- We than count the number of shelves we have available. The end result knows either how many empty shelves we can disperse throughout the collection or knowing how many extra shelves we need. See formula below:

- Inches of books per call number
- /
- Total inches per shelf
- =
- Total shelves needed for books
- Total shelves available
- -
- Total shelves needed
- =
- # of empty shelves to disperse

Collection Development Formula:

- #times circulated/total collection in given call number = %usage ratio
- Usage ratio times avg cost of books in given call number = need
- (Need/total need) times budget = cost per call number
- Cost per call number/avg cost per call number = number of books
- + or − need = Need factor

Fort Kent Category	Description	Size of Collection:	Total for LC class	# of Check Outs	total for LC class		Usage Ratio	avg cost per book*	Need Factor	Need	Budget$ 5000	# of books
101	AC - AZ	234	234	8	8		0.034	$72.40	-2.48	0.00	-$0.17	0.00
102	B	542		18								
103	BC	22		2								
104	BD	87		1								
105	BF 1-839	822		71								
106	BF 840-1999	160		12								
107	BH	114		18								
108	BL	270		98								
109	BM	36		1								
110	BP	63		15								
111	BQ	26		17								
112	BR-BX	829	2971	54	307		0.103	$59.32	1.00	7.13	$254.90	4.30
116	C - CS	386		55								
117	CT 1-3150 & CT	146		5								
118	CT 3200-3910	15	547	1	61		0.112	$52.54	-5.86	0.00	-$0.03	0.00

Attendance of students using enrollment as a factor:

- Divide the #patrons entering the library by the #people enrolled = % increase or decrease of library activity.