Grade 9 Academic Math
Percentage Practice Problems

In order to convert a percent into a decimal, you must <u>divide the number by 100</u>. For example: 5% —> 5/100 = 0.05. Therefore, you would then multiply the given number by the decimal to find the appropriate percent. **Example: 5% of 45 —> 5/100 = 0.05 —> 45 x 0.05 = 2.25**

Warm up questions – Converting percents into decimals:
1) 56%
2) 79%
3) 3%
4) 9.8%
5) 0.22%
6) 7011%
7) 518%

In order to convert a decimal into a percent, you must <u>multiply the number by 100</u>. **For example: 0.05 —> 0.05 x 100 = 5%.**

Warm up questions – Converting decimals into percents:
1) 0.36
2) 0.0029
3) 5.83
4) 0.12
5) 0.034
6) 0.93
7) 0.0037
8) 3.14159

In order to convert a percent into a fraction, you must write the <u>percent over 100</u>. Make sure to reduce into lowest terms wherever possible. **For example: 25% = 25/100 which can be further reduced to 1/4.**

Warm up questions – Converting percents to fractions:
1) 35%
2) 12.5%
3) 98%
4) 57%

5) 63%

6) 42%

7) 3%

8) 0.065%

In order to convert a fraction into a percent, you must first <u>solve the fraction and then multiply it by 100</u>.
For example: 15/90 —> 15/90 = 0.1667 (this has a repeating decimal, so I rounded it up at the last decimal place) —> 0.1667 x 100 = 16.67%

Warm up questions – Converting fractions into percents:
1) 15/45

2) 13/26

3) 98/100

4) 5/26

5) 3/9

6) 14/27

7) 16/20

8) 33/42

Conversion practice:

Fraction	Decimal	Percent
1/2		
		43%
	0.037	
		5.8%
2.5/10		
	0.69	
	3.14	
		13.75%

Word problems practice:

1) Anya eats a chocolate bar that contains 5% of her daily suggested amount of calories from sugar. Her daily suggested amount of calories is 1500 cals. How many calories of sugar did she consume in the chocolate bar?

2) A rocket is launched and reaches a peak height of 85m at 4 seconds. If the rocket reached 90% of its peak height at 3 seconds, what was the height at t = 3s?

3) Winnie bought $327 worth of toys at the store and her receipt says that she saved $65. What was the discount she received? Show your work and write your answer as a percent.

4) Valerie scored a 89% on her math test. The test was out of a possible 75 marks. How many marks did she receive on the test?

5) Fred has an assignment due for his English class where he has to read a book and write an essay. The book is 315 pages and Fred was hoping to read 17% of the book everyday. His report is due in 7 days and he needs at least 2 days to write and edit the report. How many pages is he hoping to read everyday? At this rate, will he have enough time to read the book? If not, how many days will he need to read the book so that he can have 2 days to edit and write the essay? Show all of your work and provide a written statement.