Comparing Primate Dentition: Teachers Copy

Using the information below and the photographs on the following pages, classify and give the dental formulas for each of the following primates as either: primitive, prosimian, New World Monkey Old World Monkey, Ape, or Human.

TEETH:

Incisors; used for seizing, stripping, and puncturing
Canines; used in gripping and puncturing (size is larger in males)
Premolars & Molars; used for grinding

LOWER JAWS:

Rounded Angle: Apes and Humans
Sharp Angle: Primative Primates and New and Old World Monkeys

DENTAL FORMULA

When calculating formula, count the number of teeth on one halve of the jaw and multiply that number by two

UPPER JAW Incisors+Canines+Premolars+Molars x 2 = Total
LOWER JAW + Incisors+Canines+Premolars+Molars x 2 Number of Teeth

Upper& Lower Dental Formulas

PRIMITIVE PRIMATES 2143 x2= 40
PROSIMIANS 2133 x2= 36
NEW WORLD MONKEYS 2133 x2= 36
MARMOSETS 2132 x2= 32
OLD WORLD MONKEYS 2123 x2= 32
APES
HOMO SAPIENS

In most primates the canine teeth are much longer than the other teeth. In humans the size of the canines are reduced and the ends are blunt. Short canines allow for increased side to side movement of the jaw
Dental Formulas and Primate Classification

1. ____________________ 2. ____________________
3. ____________________ 4. ____________________
5. ____________________ 6. ____________________
7. ____________________ 8. ____________________

What would the possible diet of #3 be?

What would the possible diet of #5 be?

Describe the differences between the male and female of the following species #1:

Describe the shape of the jaw (rounded, somewhat rounded, or sharp) for the following primates:

Ape __________ Human ___________ Monkey____________

Suggest a reason why ape and human jaws are shaped the way they are and why monkeys have a slightly different shape.
Primate Dentition Photographs

1.

2.

3.
Male Species #1

Female Species #1
## Comparing Primate Dentition

### Key

<table>
<thead>
<tr>
<th>Species</th>
<th>Sex</th>
<th>Dental Formula</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Howler Monkey</td>
<td>Male</td>
<td>2133</td>
<td>New World Monkey</td>
</tr>
<tr>
<td>2. Gibbon</td>
<td>Female</td>
<td>2123</td>
<td>Lesser Ape</td>
</tr>
<tr>
<td>3. Tree Shrew</td>
<td>Male</td>
<td>2143</td>
<td>Primitive</td>
</tr>
<tr>
<td>4. Rhesus Monkey</td>
<td>Female</td>
<td>2123</td>
<td>Old World Monkey</td>
</tr>
<tr>
<td>5. Baboon</td>
<td>Male</td>
<td>2123</td>
<td>Old World Monkey</td>
</tr>
<tr>
<td>6. Human</td>
<td>Male</td>
<td>2122*</td>
<td>Homo Sapiens</td>
</tr>
<tr>
<td>7. Orangutan</td>
<td>Male</td>
<td>2122**</td>
<td>Ape</td>
</tr>
<tr>
<td>8. Chimpanzee</td>
<td>Male</td>
<td>2123</td>
<td>Ape</td>
</tr>
</tbody>
</table>

* Wisdom teeth removed

** Juvenile

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