Math 6 - Greatest Common Factor (GCF) Notes

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greatest Common Factor (GCF)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Find the GCF...**

*Method 1 – List the factors of each number*

Factors of 14: ___ ___ ___ ___
Factors of 28: ___ ___ ___ ___ ___ ___

*Circle the common factors. What is the greatest common factor?*

**Try It!**

Find the GCF of the following numbers by listing the factors of each.

1. 14:
   20:

2. 16:
   42:

3. 8:
   18:

4. 24:
   36:

5. 45:
   30:
Find the GCF...

Method 2 – Use Prime Factorization (factor trees)

Step 1: Create a factor tree for each number

Prime Factors of 14:

```
    /
   / |
  /   |
 2   7
```

Prime Factors of 28:

```
    /
   / |
  /   |
 2   2 7
```

Step 2: List the factors for each number.

14: 2 \( \cdot \) 7
28: 2 \( \cdot \) 2 \( \cdot \) 7

Step 3: Circle the common factors and identify the factor that is shared

14: 2 \( \cdot \) 7
28: 2 \( \cdot \) 2 \( \cdot \) 7

Multiply the common factors.

\( \_ \_ \_ \times \_ \_ \_ = \_ \_ \_ \)

Try It!

Find the GCF of the following numbers using prime factorization.

1) 18
   30

18: 
30:

Multiply:

GCF: 

2) 60
   45

60:
45:

Multiply:

GCF: 

GCF: 