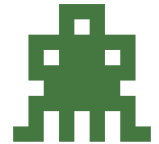# Greatest Common Factor Part 2

The **greatest common factor** (GCF) is the largest factor that divides two numbers.

EXAMPLE: **Find the greatest common factor of 24 and 18.**

Step 1	Step 2	ANSWER
Find the prime factors of each number. $$24 = 6 \times 4$$ $$2 \times 3 \times 2 \times 2$$ $$18 = 6 \times 3$$ $$2 \times 3 \times 3$$	Find the common prime factors of 24 and 18. $$24 = 2 \times 3 \times 2 \times 2$$ $$18 = 2 \times 3 \times 3$$	The common prime factors of 24 and 18 are 2 and 3. The greatest common factor can be found by multiplying all the common prime factors. Therefore, the greatest common factor of 24 and 18 is $2 \times 3 =$ ⑥

Directions: Find the greatest common factor of the numbers below.

$$30 = \underline{\ 3\ } \times \underline{\quad} \times \underline{\quad}$$

$$45 = \underline{\ 3\ } \times \underline{\ 3\ } \times \underline{\quad}$$

The common prime factors are _____ . The greatest common factor (GCF) is _____ .

$$36 = \underline{\ 3\ } \times \underline{\ 2\ } \times \underline{\ 2\ } \times \underline{\quad}$$

$$42 = \underline{\ 7\ } \times \underline{\quad} \times \underline{\ 3\ }$$

The common prime factors are _____ . The greatest common factor (GCF) is _____ .

$$120 = \underline{\ 2\ } \times \underline{\quad} \times \underline{\ 3\ } \times \underline{\ 5\ } \times \underline{\quad}$$

$$100 = \underline{\ 2\ } \times \underline{\ 5\ } \times \underline{\quad} \times \underline{\quad}$$

The common prime factors are _____ . The greatest common factor (GCF) is _____ .