

Name: _____

Using Prime Factorization to find the H.C.F

Read the questions below carefully and answer to the best of your abilities.

1. Find the H.C.F. of 60 and 20 using prime factorization.

Write the prime factorization of 60: $___ \times ___ \times ___ \times ___$

Write the prime factorization of 20: $___ \times ___ \times ___$

H.C.F. of 60 and 20 = $___ \times ___ \times ___ = _____$

2. Find the H.C.F. of 56 and 84 using prime factorization.

Write the prime factorization of 56: $___ \times ___ \times ___ \times ___$

Write the prime factorization of 84: $___ \times ___ \times ___ \times ___$

H.C.F. of 56 and 84 = $___ \times ___ \times ___ = _____$

3. Find the H.C.F. of 12, 16 and 24 using prime factorization.

Write the prime factorization of 12: $___ \times ___ \times ___$

Write the prime factorization of 16: $___ \times ___ \times ___ \times ___$

Write the prime factorization of 24: $___ \times ___ \times ___ \times ___$

H.C.F. of 12, 16 and 24 = $___ \times ___ = _____$

4. Find the H.C.F. of 6, 9 and 18 using prime factorization.

Write the prime factorization of 6: $___ \times ___$

Write the prime factorization of 9: $___ \times ___$

Write the prime factorization of 18: $___ \times ___ \times ___$

H.C.F. of 6, 9 and 18 = $_____$

5. Find the H.C.F. of 45, 65, 80 and 90 using prime factorization.

Write the prime factorization of 45: $___ \times ___ \times ___$

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Write the prime factorization of 65: _____ $\times$ _____

Write the prime factorization of 80: _____ $\times$ _____ $\times$ _____ $\times$ _____ $\times$ _____

Write the prime factorization of 90: _____ $\times$ _____ $\times$ _____ $\times$ _____

H.C.F. of 45, 65, 80 and 90 = _____