

3.2 Factors, Prime Numbers, and Prime Factorization

Chapter 3: Factors, Multiples, and Fractions

Name: _____

Date: _____

Class/Period: _____

Problem 3.19 List all positive factors of 8.

Problem 3.22 Classify 95 as prime or composite. Justify your answer.

Problem 3.20 List all positive factors of 20.

Problem 3.23 Classify 147 as prime or composite. Justify your answer.

Problem 3.21 List all positive factors of 64.

Problem 3.24 Classify 101 as prime or composite. Justify your answer.

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Problem 3.25 Find the prime factorization of 56.

Problem 3.28 Find the prime factorization of 48.

Problem 3.26 Find the prime factorization of 75.

Problem 3.29 Find the prime factorization of 702.

Problem 3.27 Find the prime factorization of 180.

Problem 3.30 Find the prime factorization of 1,260.

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Problem 3.31 Draw two factor trees for 72. Explain why their prime factors match.

Problem 3.33 Find the smallest composite number with three distinct prime factors.

Problem 3.32 Why is $90 = 9 \cdot 10$ not a prime factorization? Finish it.

Problem 3.34 Write $2^3 \cdot 3^2 \cdot 5$ in standard form.