

10.3 Factors, Multiples, and Fractions

Chapter 10: Final Cumulative Review

Name: _____

Date: _____

Class/Period: _____

10.69 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Use divisibility rules to test 73,458 for divisibility by 2, 3, 4, 5, 6, 9, and 10.

10.72 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find the prime factorization of 2520.

10.70 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Determine whether 221 is prime. Explain why no larger trial factor is needed.

10.73 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find the GCF of 84 and 126.

10.71 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Use the ladder method to find $\text{GCF}(2,520, 3,780)$, then explain which factors on the ladder form the GCF.

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10.74 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find the LCM of 18 and 30.

10.77 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Explain why GCF, not LCM, is used to divide 45 apples and 60 oranges into the greatest number of identical bags.

10.75 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A teacher has 48 red pens and 72 blue pens. Find the greatest number of identical kits with no leftovers.

10.78 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A number is divisible by 6 and 10 but not 4. Give the three smallest possibilities.

10.76 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Two lights flash every 18 and 24 seconds. If they flash together now, when next?

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10.79 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Convert to an improper fraction and explain what the numerator counts. $3\frac{5}{8}$

10.81 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Simplify using the greatest common factor. $\frac{126}{210}$

10.80 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Convert to a mixed number. $\frac{47}{6}$

10.82 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find the missing numerator. $\frac{7}{12} = \frac{x}{84}$

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10.83 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Use the fraction bars to write an equivalent-fraction statement and explain the scale factor.



10.84 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Order $\frac{5}{8}$, $\frac{7}{12}$, $\frac{11}{18}$, $\frac{2}{3}$ from least to greatest. Explain one efficient method.

10.85 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Which is closer to 1: $\frac{17}{18}$ or $\frac{23}{25}$? Use the missing part from 1.

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10.86 Directions:

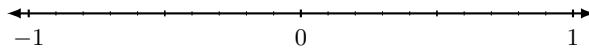
Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A student says $\frac{4}{9} > \frac{5}{11}$ because both 4 and 9 are smaller. Explain why separate numerator-denominator comparison fails.

10.87 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Place $-\frac{3}{4}$, $\frac{1}{8}$, $\frac{5}{6}$, $-\frac{2}{3}$ on the number line and order them.



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10.88 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find a fraction between $\frac{3}{7}$ and $\frac{4}{7}$ and prove it lies between.

10.91 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $2\frac{3}{8} + 1\frac{5}{8}$ and write the answer in simplest form.

10.89 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{5}{12} + \frac{7}{12}$ and write the answer in simplest form.

10.92 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $4\frac{7}{9} - 2\frac{2}{9}$ and write the answer in simplest form.

10.90 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{13}{15} - \frac{4}{15}$ and write the answer in simplest form.

10.93 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{5}{6} + \frac{7}{10}$ and show how the common denominator is chosen.

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10.94 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{11}{12} - \frac{5}{18}$ and show how the common denominator is chosen.

10.97 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{7}{9} \cdot \frac{27}{14}$, simplifying before multiplying when possible.

10.95 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $3\frac{1}{4} - 1\frac{5}{6}$ and show how the common denominator is chosen.

10.98 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $2\frac{1}{3} \cdot 1\frac{5}{7}$, simplifying before multiplying when possible.

10.96 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $2\frac{2}{5} + 4\frac{7}{15}$ and show how the common denominator is chosen.

10.99 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{11}{12} \cdot \frac{18}{55}$, simplifying before multiplying when possible.

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10.100 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{3}{5} \cdot \frac{7}{16}$, simplifying before multiplying when possible.

10.103 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{7}{15} \div 2\frac{1}{3}$ and check by multiplication.

10.101 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $\frac{5}{6} \div \frac{10}{21}$ and check by multiplication.

10.104 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $5\frac{1}{4} \div \frac{3}{4}$ and check by multiplication.

10.102 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Calculate $3\frac{1}{2} \div \frac{7}{8}$ and check by multiplication.

10.105 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Maya drinks $\frac{3}{8}$ L in the morning and $\frac{5}{12}$ L later. Find the total.

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10.106 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A recipe uses $\frac{3}{4}$ cup per batch. How many batches can be made from $5\frac{1}{4}$ cups?

10.109 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A hiker walks $2\frac{3}{4}$ miles, then $1\frac{5}{6}$, then backtracks $\frac{5}{8}$. How far from the start?

10.107 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A tank is $\frac{3}{5}$ full, then $\frac{1}{4}$ of total capacity is added. What fraction is full?

10.110 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A baker uses $\frac{2}{3}$ of a bag for bread and $\frac{1}{4}$ of the original bag for muffins. What remains?

10.108 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A student calculates $\frac{2}{5} + \frac{3}{7} = \frac{5}{12}$. Find and correct the error.

10.111 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A class completes $\frac{3}{5}$ of a project Monday and half the remaining work Tuesday. What fraction remains?

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10.112 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A rectangular banner is $3\frac{1}{2}$ ft by $2\frac{1}{4}$ ft. Find area.

10.113 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A 120-L tank is $\frac{7}{8}$ full, then $\frac{2}{5}$ of the water is used. How many liters remain?

10.114 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Three fractions sum to 2. Two are $\frac{5}{6}$ and $\frac{7}{12}$. Find the third.

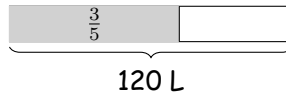
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10.115 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

The bar model shows $\frac{3}{5}$ of 120 L. Find the amount shown, then determine what remains.



10.116 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Find all unit fractions $\frac{1}{n}$ such that $\frac{1}{3} < \frac{1}{n} + \frac{1}{4} < \frac{1}{2}$.

10.117 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Two numbers have GCF 6 and LCM 180. One is 30. Find the other and verify.

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10.118 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

The prime factorization is $2^3 \cdot 3^2 \cdot 5$. Determine the number of positive factors by counting exponent choices.