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Practice Test Practice Test Topic 3: Rational Numbers Practice Test Practice Test

KEY

1. Here are the prices of four grocery items.

Round each price to the nearest dollar to estimate the total cost.

$\$29.45 + \$3.98 + \$14.61 + 11.08$

$\$29 + \$4 + \$15 + \$11 = \$59$

2. Maria is going to make muffins for the party. One recipe makes 2 dozen muffins. She plans to make 16 dozen muffins. The original recipe calls for 3 cups of flour. How much flour does she need?

1 recipe = 2 doz

3 cups flour

24 cups flour

2 doz  $\times 8 \rightarrow$  16 doz

3. A recipe for muffins makes 12 muffins. Stella and her friends want to expand it to make 78 muffins. By what factor should they multiply the amount of each ingredient?

$12 \times ? = 78$

12  $\overline{) 78.0}$   
72  
60  
60

4. Stella is going to buy a card that costs \$0.98. She also wants to buy 2 boxes of crackers at \$1.89 each, and 2 bottles of juice at \$1.70 each. Which answer is the most reasonable amount of money for her to take to the store?

- \$20      \$10      \$25      \$5

$\$1 + \$4 + \$4 = \$9$

$\$1 \text{ card} \times 1 = 1$

$\$2 \text{ crackers} \times 2 = 4$

$\$2 \text{ juice} \times 2 = 4$

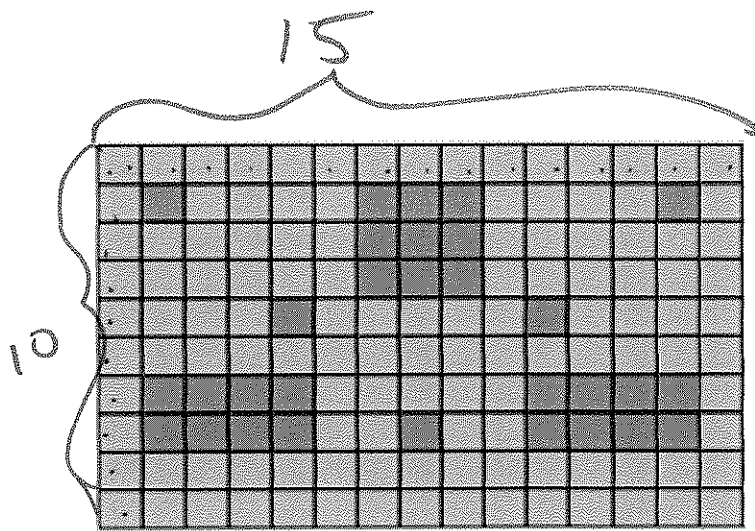
5. Gilbert is a member of the soccer team and the basketball team. He has set up a training schedule for himself. Every 5th day he will practice soccer and every 2nd day he will practice basketball. What is the first day that he will practice both sports?

soccer 5, 10, 15, 20  
basketball 2, 4, 6, 8, 10

$5 = 5 \cdot 1$

$2 = 2 \cdot 1$

2, 5



6.

Write an expression that represents the dark gray squares.

$$3 \times 3 \times 1 + 1 \times 1 \times 5 + 2 \times 4 \times 2$$

$$3^2 \cdot 1 + 1^2 \cdot 5 + 2^2 \cdot 4$$

Write an expression that represents the light gray squares.

$$(10 \times 15) - (3^2 \cdot 1 + 1^2 \cdot 5 + 2^2 \cdot 4)$$

all squares - dark gray squares

7. Maria provided Gilbert with a problem to practice for their math quiz.

What was his result?

$$16 - 48 \div 4^2 \cdot 4 + 6 =$$

$$16 - 48 \div 16 \cdot 4 + 6$$

$$16 - 3 \cdot 4 + 6$$

$$16 - 12 + 6$$

$$4 + 6 = 10$$

8. Solve the following expression.

$$26 + (31 - 2^2) \div 3 - 2 \cdot 3$$

$$26 + (31 - 4) \div 3 - 2 \cdot 3$$

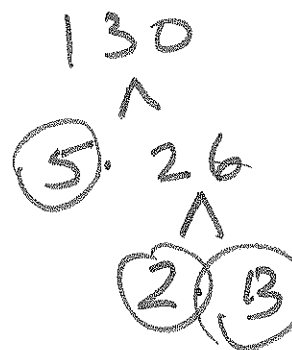
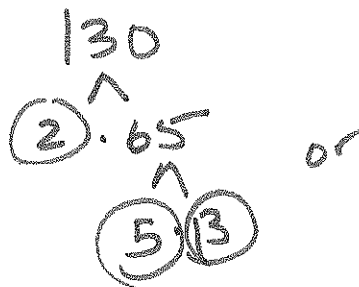
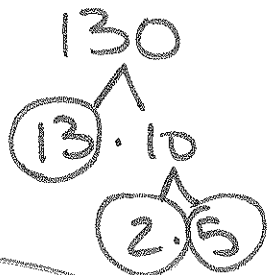
$$26 + 27 \div 3 - 2 \cdot 3$$

$$26 + 9 - 6$$

$$35 - 6$$

$$29$$

9. What is the **prime factorization** of 130?



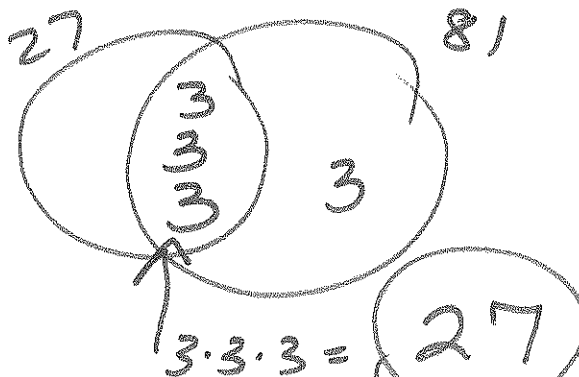
$$130 = 2 \cdot 5 \cdot 13$$

$$130 = 2 \cdot 5 \cdot 13$$

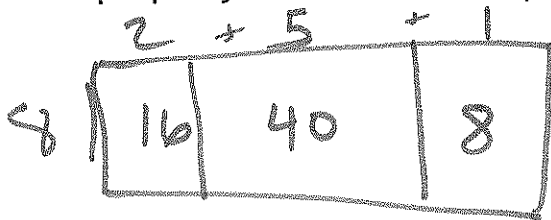
10. What is the greatest common factor of 27 and 81?

$$27 = 3 \cdot 3 \cdot 3$$

$$81 = 3 \cdot 3 \cdot 3 \cdot 3$$



11. Use the distributive property to rewrite the expression  $16 + 40 + 8$ ?



$$16 = 2 \cdot 2 \cdot 2 \cdot 2$$

$$40 = 2 \cdot 2 \cdot 2 \cdot 5$$

$$8 = 2 \cdot 2 \cdot 2$$

$$GCF = 8$$

$$8(2 + 5 + 1)$$