**Unit 2 Study Guide - Operations with Rational Numbers**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_**

**Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

**Simplify.**

\_\_\_\_ 1. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. |  | d. |  |

\_\_\_\_ 2. ****

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. |  | d. |  |

\_\_\_\_ 3. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. | 13 | d. | 14 |

**Find the product. Simplify if possible.**

\_\_\_\_ 4. 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  | b. |  | c. |  | d. |  |

**Short Answer**

 5. In four tosses Harry averaged  feet on the ring toss game. Myles averaged 32  feet. How much longer did Myles throw than Harry? (NS.1c/1d)

 6. On a number line, what is the distance between  and -7? (NS.1c/1d)

 7. B&N stock increased by 9.73 points on Monday, dropped 3.56 points on Tuesday and Wednesday, and increased on Thursday 7.8 points. What was the total change? (NS.1c/1d)

 8. Rewrite  in decimal form. (NS.2)

 9. What is the value of ? (NS.2)

 10. Wanda gave  of her gummy bears to her friend Sam. He gave  of what was left to Jessica. What fraction did he have remaining? (NS.3)

 11. Harrison lives 6.78 miles from school. The Coffee Shop is 2.98 miles from school, on the way home. If Harrison stops at the Coffee Shop on the way home from school, how much farther does he have to walk to get home? (NS.3)

 12. Find the area of a rectangular room with the dimensions of 18.4 feet long and 13  feet wide. (NS.3)

 13. Find the perimeter of a rectangular room with the dimensions 16.2 feet long and 14  wide. (NS.3)

 14. Angie uses 4 inches of string for each necklace she makes. She makes four necklaces per day. If she has 162 inches of string, how many days until she needs to buy more string? (EE.3)

 15. Carol drove 4 miles north, 7.55 miles south, and 8 miles north, and 2 miles south. How many miles from his starting point does she end up? (EE.3)

 16. Travis spent $15.70 on food, $17.40 on game tokens, $14.45 on bumper boats, and $8.07 on prizes at Friendly’s Fun Palace. If he ended with $15.68, how much did he originally bring to Friendly’s? (EE.3)

 17. I Madison walked 1.875 miles on Monday, 5 miles Tuesday, and 4 miles on Wednesday, how far did he walk altogether? (EE.3)

 18. Mitchell is painting a square portrait measuring 6 feet long in the center of a square table that is 16 feet wide. How far from the sides of the table will she start the sides of the portrait? (EE.3)

 19. Simplify -1.4 • 

 20. What is the value of   - 

**Unit 2 Study Guided - Operations with Rational Numbers**

**Answer Section**

**MULTIPLE CHOICE**

 1. ANS: C PTS: 1 DIF: L2

REF: 5-3 Adding and Subtracting Fractions

OBJ: 5-3.1 Adding and Subtracting Fractions

NAT: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48 STA: 8NC 1.01 | 8NC 3.01

TOP: 5-3 Example 1

KEY: adding fractions | subtracting fractions | least common denominator

MSC: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48

 2. ANS: B PTS: 1 DIF: L1

REF: 5-3 Adding and Subtracting Fractions

OBJ: 5-3.1 Adding and Subtracting Fractions

NAT: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48 STA: 8NC 1.01 | 8NC 3.01

TOP: 5-3 Example 2

KEY: adding fractions | subtracting fractions | least common denominator

MSC: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48

 3. ANS: C PTS: 1 DIF: L1

REF: 5-3 Adding and Subtracting Fractions

OBJ: 5-3.2 Adding and Subtracting Mixed Numbers

NAT: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48 STA: 8NC 1.01 | 8NC 3.01

TOP: 5-3 Example 3 KEY: adding fractions | subtracting fractions

MSC: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48

 4. ANS: A PTS: 1 DIF: L1

REF: 5-4 Multiplying and Dividing Fractions

OBJ: 5-4.1 Multiplying Rational Numbers

NAT: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48 STA: 8NC 1.01 | 8NC 3.02

TOP: 5-4 Example 2 KEY: multiplying fractions

MSC: NAEP N3a | CAT5.LV18.46 | CAT5.LV18.51 | CTBS.LV18.46 | CTBS.LV18.51 | ITBS.LV14.NPO | S9.Adv1.NS | S10.Adv1.NS | TV.LV18.11 | TV.LV18.48

**SHORT ANSWER**

 5. ANS:

7 or $\frac{187}{24}$

PTS: 1

 6. ANS:

-7

PTS: 1

 7. ANS:

10.41

PTS: 1

 8. ANS:

.875

PTS: 1

 9. ANS:

18/9 or 2

PTS: 1

 10. ANS:



PTS: 1

 11. ANS:

3.8 miles

PTS: 1

 12. ANS:

242.88 square feet

PTS: 1

 13. ANS:

60.8 feet

PTS: 1

 14. ANS:

9

PTS: 1

 15. ANS:

22.625 or 22 or $\frac{181}{8}$

PTS: 1

 16. ANS:

$71.30

PTS: 1

 17. ANS:

11.275 or 11 or $\frac{451}{40}$

PTS: 1

 18. ANS:

4.75 or 4or 19$\frac{19}{4}$

PTS: 1

 19. ANS:

-1.12

PTS: 1

 20. ANS:

-.5 or -1/2

PTS: 1