

# *Rational Rigor*



7<sup>th</sup> Grade Common Core  
Rational Number Operations  
Task Cards

## **Teacher Directions**

1. Print task cards onto card stock, cut apart, and laminate.
2. Students should play in groups of two to three. Groups will place task cards face down in a stack on the table.
3. One student will draw a card from the top. Everyone will solve the problem on their own paper. Students must write the problem number, show their work for solving the problem, and circle their answers. Problems will not be completed in order as the cards should be mixed up before beginning to play.
4. Someone at the table looks at the answer key provided and shares the correct answer with everyone else. If anyone has an incorrect answer, it is the responsibility of the group to explain the process they used in working the problem. If more assistance is needed, the teacher will explain.
5. Students will turn in their papers at the end of class as proof of their work.

## **Game Directions**

1. Place task cards face down in a stack on the table.
2. One student draws a card from the top.
3. Everyone solves the problem on your own paper.
4. Write the problem number, show your work for solving the problem, and circle your answers. Problems will not be completed in order as the cards should be mixed up before beginning to play.
5. Someone at the table looks at the answer key and reveals the correct answer. If anyone does not have the correct answer, it is the responsibility of the rest of the group to explain to them how to work the problem correctly. If you still need help, call the teacher over.
6. Turn in your papers at the end of class as proof of your work.

1. Write  $-3\frac{13}{20}$  as a decimal.

2. Solve  $5.73 - (-3.56)$

3. Solve  $-\frac{5}{3} + 2\frac{1}{3}$

4. Solve  $2\frac{2}{5} - 3\frac{1}{2}$

5. Solve  $\left(-\frac{2}{5}\right)\left(-1\frac{1}{4}\right)$

6. Solve  $0.15 \times (-0.6)$

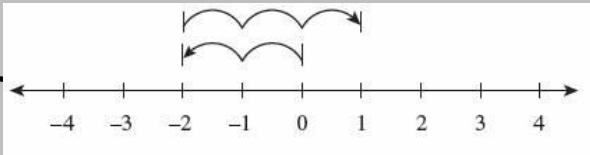
7. Solve  $-\frac{2}{7} \div \left(-\frac{8}{21}\right)$

8. Solve  $-4.2 \div 12$

9. James dug a 4-foot hole to plant a tree. The hole needs to be one foot deep plus an additional 6 inches deep for each foot the tree is tall. How tall was the tree James planted?

10. Your bank account has a balance of \$45.24. This is \$51.35 more than yesterday. What was your account balance yesterday?

11. What number sentence is shown on the number line below?



12. Mount Katahdin, the highest point in Maine, is 5,267 feet above sea level. A part of Casco Bay is 246 feet below sea level. What is the difference between these two levels?

13. It costs \$5.75 to enter a carnival. Each ride costs \$1.25. You have \$14. How many rides can you ride?

14. How many  $\frac{2}{3}$  ounce bags of strawberries can be made with 8 ounces of strawberries?

15. Trina ran  $1\frac{1}{2}$  miles and Tom ran  $2\frac{1}{4}$  miles. How much further did Tom run than Trina?

16. A 10.5 gallon aquarium is  $\frac{2}{3}$  full. How many more gallons of water does it take to fill the aquarium?

17. Solve  $-21 \div 3 - 1 + 7 \cdot 2$

18. Ariel was put in charge of feeding her dog. She used a  $\frac{1}{4}$  cup scoop to fill the dog bowl that holds 10 cups. How many scoops did she have to use?

19. Tiara bought a gift card for \$50.00. After various purchases totaling \$29.99, she received a credit of \$5.00. How much is left on her gift card?

20. What is the additive inverse of  $2\frac{5}{9}$ ?



21. Solve  $|3|$

22. What does absolute value mean?

23. 
$$\frac{-6+(-3)+(-4)}{4}$$

24. Rico had  $\frac{3}{4}$  of a 5 pound bag of sugar left and decided to split it among three containers. How many pounds of sugar did he put into each container?

25. Scientists aboard a submarine are gathering data at an elevation of  $-42\frac{1}{2}$  ft. Scientists aboard a submersible are taking photographs at an elevation of  $-45\frac{1}{3}$  ft. Which scientists are closer to the surface of the ocean?

26. Christa will use  $\frac{3}{4}$  of her garden plot for vegetables, with  $\frac{2}{3}$  of the vegetable section for tomatoes. What fraction of the whole garden plot will be used for tomatoes?

**Put the set of numbers in order from smallest to largest:**

27.

$\{12, -4, |-8|, 6, -(-2)\}$

28. Write  $-\frac{7}{4}$  as a decimal.

29. At 6:00pm the temperature was  $35^{\circ}$ . What was the temperature at midnight if there was a  $6^{\circ}$  drop in temperature each hour?

30. Solve  $-\frac{4}{5}\left(-\frac{3}{8}\right) \div -\frac{9}{20}$

31. A jogger ran her regular route 4 times in one week. Each route consisted of running  $1\frac{1}{4}$  miles to her destination and then  $1\frac{2}{3}$  miles home along a different route. How far did she run?

32. The 13 miles that a jogger ran in one week was  $\frac{5}{8}$  of the total distance she ran the whole month. How many miles did the jogger run that month?

33. Joe used  $6\frac{3}{8}$  cups of sugar to make pies. If he only has a  $\frac{1}{4}$  cup measuring scoop, how many times will he have to fill it to get enough sugar?

34. Sheila drove 225 miles on vacation. She averaged driving 18 miles per gallon of gas. How many gallons does her car hold?

35. Solve  $-2^3 + (-4)$

36. Place a second set of parentheses in the expression below so that the value of the expression is -15.

$$5 - 20 \div (-5) \cdot 2 - 7$$

37. Gina had a negative bank balance of \$14. She made a deposit of \$20. What is Gina's new bank balance?

38. The temperature at 9:00 am is  $-13^{\circ}\text{F}$ . During the next three hours the temperature rises  $20^{\circ}$ . What is the temperature at 12:00 noon?

39. A balloon at an altitude of 3,060 feet descends 490 feet and then ascends 65 feet. What is the balloon's position after these movements?

40. The outside temperature is  $3^{\circ}\text{F}$  and falling at a rate of 2 degrees per hour. What will the temperature be in 5 hours?

## Answer Key

- |     |                   |     |                        |     |                                  |
|-----|-------------------|-----|------------------------|-----|----------------------------------|
| 1.  | -3.65             | 14. | 12 bags                | 27. | -4, -(-2), 6,  -8 , 12           |
| 2.  | 9.29              | 15. | $\frac{3}{4}$ mi       | 28. | -1.75                            |
| 3.  | $\frac{2}{3}$     | 16. | $3\frac{1}{2}$ gallons | 29. | -1°                              |
| 4.  | $-1\frac{1}{10}$  | 17. | 6                      | 30. | $-\frac{2}{3}$                   |
| 5.  | $\frac{1}{2}$     | 18. | 40 scoops              | 31. | $11\frac{2}{3}$ miles            |
| 6.  | -0.09             | 19. | \$25.01                | 32. | $20\frac{4}{5}$ miles            |
| 7.  | $\frac{3}{4}$     | 20. | $-2\frac{5}{9}$        | 33. | $25\frac{1}{2}$ times            |
| 8.  | -0.35             | 21. | 3                      | 34. | $12\frac{1}{2}$ gallons          |
| 9.  | $2\frac{2}{3}$ ft | 22. | Distance from zero     | 35. | -12                              |
| 10. | -\$6.11           | 23. | $-3\frac{1}{4}$        | 36. | $5 - 20 \div (-5) \cdot (2 - 7)$ |
| 11. | $-2 + 3 = 1$      | 24. | $1\frac{1}{4}$ pounds  | 37. | \$6.00                           |
| 12. | 5513 ft           | 25. | Submarine scientists   | 38. | 7°                               |
| 13. | 6 rides           | 26. | $\frac{1}{2}$          | 39. | 2635 ft                          |
|     |                   |     |                        | 40. | -7°                              |