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Lesson 4 Skills Practice

Dividing Rational Numbers

Find the multiplicative inverse of each number.

1. $\frac{7}{12}$
2. $-\frac{3}{10}$
3. $\frac{1}{8}$
4. -64
5. $8\frac{1}{3}$
6. $-10\frac{2}{3}$
7. $-6\frac{5}{6}$
8. $1\frac{1}{8}$
9. 20

Find each quotient. Write in simplest form.

10. $\frac{1}{3} \div \frac{7}{18}$
11. $-\frac{2}{5} \div \frac{4}{25}$
12. $-5 \div \frac{1}{7}$
13. $\frac{2}{3} \div \frac{2}{3}$
14. $\frac{4}{5} \div \left(-\frac{1}{15}\right)$
15. $\frac{19}{20} \div \frac{4}{5}$
16. $3 \div \frac{1}{4}$
17. $-15 \div \frac{1}{2}$
18. $\frac{4}{9} \div \frac{5}{12}$
19. $\frac{7}{10} \div \left(-\frac{4}{5}\right)$
20. $\frac{7}{12} \div \left(-1\frac{1}{6}\right)$
21. $1\frac{5}{8} \div \frac{5}{8}$
22. $12\frac{3}{5} \div 2\frac{7}{10}$
23. $-\frac{3}{11} \div \frac{6}{22}$
24. $\frac{1}{8} \div \frac{15}{16}$
25. $-12\frac{4}{5} \div \left(-1\frac{1}{15}\right)$
26. $1\frac{12}{13} \div \frac{25}{26}$
27. $-7\frac{1}{3} \div 2\frac{1}{5}$
28. $\frac{x}{6} \div \frac{x}{30}$
29. $\frac{12}{5x} \div \frac{6}{2x}$
30. $\frac{m}{16} \div \frac{mp}{7}$
31. $\frac{3r}{s} \div \frac{4rs}{s^2}$
32. $\frac{a}{b} \div \frac{5}{b}$
33. $\frac{2a}{b} \div \frac{3a^2}{b^2}$
34. $\frac{3}{5c} \div \frac{1}{10c}$
35. $\frac{pq}{6} \div \frac{q}{8}$
36. $\frac{x^2}{7} \div \frac{2x}{21}$
37. $\frac{gh}{6} \div \frac{36}{h}$
38. $\frac{3n}{2m} \div \frac{5n}{5m}$
39. $\frac{4b}{c} \div \frac{5bc}{c}$

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Lesson 4 Homework Practice

Dividing Rational Numbers

Find each quotient. Write in simplest form.

1. $\frac{1}{2} \div \frac{1}{10}$
2. $-\frac{3}{8} \div \frac{9}{24}$
3. $-\frac{15}{16} \div \frac{7}{12}$
4. $\frac{17}{20} \div \left(-\frac{3}{10}\right)$
5. $-\frac{3}{8} \div \left(-\frac{3}{9}\right)$
6. $\frac{25}{32} \div \frac{15}{56}$
7. $0 \div \frac{17}{18}$
8. $-1\frac{1}{2} \div \frac{1}{4}$
9. $\frac{8}{9} \div \frac{22}{81}$
10. $8\frac{4}{9} \div 2\frac{1}{9}$
11. $4\frac{3}{5} \div \frac{2}{5}$
12. $-\frac{100}{63} \div \frac{10}{81}$
13. $18\frac{1}{3} \div \left(-4\frac{1}{6}\right)$
14. $-3\frac{2}{9} \div \frac{4}{27}$
15. $-2\frac{5}{6} \div \frac{3}{51}$
16. $4\frac{11}{12} \div 4\frac{5}{6}$
17. $\frac{2x}{3} \div \frac{1}{9}$
18. $\frac{a}{4} \div \frac{a}{8}$
19. $\frac{4k}{5} \div \frac{25}{2k}$
20. $\frac{ab}{8} \div \frac{b}{a}$
21. $\frac{2c}{b} \div \frac{4a}{b}$
22. $\frac{y}{x} \div y^2$
23. $\frac{3st}{r} \div \frac{4t}{r}$
24. $\frac{a^2}{b^2} \div \frac{c^2}{b^2}$
25. $-\frac{2x}{y} \div \frac{4}{y}$
26. $\frac{m^2}{2np} \div \frac{n}{4p}$

27. Evaluate $x \div y$ if $x = 3\frac{1}{2}$ and $y = \frac{3}{4}$.

28. Evaluate $w \div z$ if $w = \frac{6}{7}$ and $z = 3$.

29. What is the average speed that Robin must drive to reach her friend's house 170 miles away in $2\frac{1}{2}$ hours?

30. How many choir robes can be made from $20\frac{1}{4}$ yards of fabric if each robe needs $1\frac{1}{8}$ yards?

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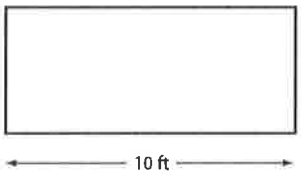
Lesson 4 Problem-Solving Practice

Dividing Rational Numbers

1. In the 16th century, Spain had a silver coin called a peso. The coin was divided into 8 reals. Reals were stamped with an 8, and became known as pieces of eight. How many pesos would have been equivalent to 26 pieces of eight?

2. An anna is an Indian coin equivalent to one sixteenth of a rupee. How many rupees equal 45 annas?

3. The width of a rectangle can be found by dividing its area by its length. The area of the rectangle below is $30\frac{1}{2}$ square feet.



What is the width of the rectangle?

4. In order to vote on any decision, a club requires the presence of $\frac{3}{16}$ of all club members. To be approved, a proposal needs $\frac{2}{3}$ of the votes cast. A club has a membership of 224. What is the minimum number of votes needed for a proposal to be approved?

5. Rachel has a tub that holds $10\frac{1}{2}$ gallons of water. The smaller container she is using to fill the tub holds $1\frac{3}{4}$ gallons of water. How many times will she need to empty the smaller container into the tub until the tub is full?

6. Refer to the information in Exercise 5. Each stack of tiles is $17\frac{1}{2}$ inches tall. If each tile is $1\frac{1}{4}$ inches thick, how many tiles are in a stack?

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