

Grade**7****Prerequisite Skills Test****Divide. Write the answer in simplest form.**

1. $\frac{4}{5} \div \frac{6}{7}$

2. $1\frac{2}{5} \div 1\frac{1}{3}$

3. Evaluate $29.197 - 15.524 + 5.704$. Write the answer as a decimal.**Multiply or divide. Write the answer as a decimal.**

4. 7.2×9.34

5. $0.798 \div 0.42$

6. Represent the ratio relationship using a graph.

Time (minutes)	2	4	6	8
Distance (miles)	5	10	15	20

7. Write a unit rate for the situation, “294 calories in 6 servings.”

8. You earn \$40 for washing 8 cars. How much do you earn for washing 4 cars?

9. How many ounces are in 2 pounds?

10. 5% of what number is 12?

11. Use the Distributive Property to simplify the expression $8(2x + 1)$.12. You purchase w items for \$6 each. The total cost is \$48. Write an equation that you can use to find w .**Solve the equation.**

13. $x + 2 = 8$

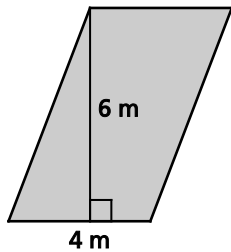
14. $6y = 18$

15. You have \$5 and earn \$0.25 for each cup of orange juice you sell. Write an equation that represents the total amount A (in dollars) you have after selling j cups of orange juice.

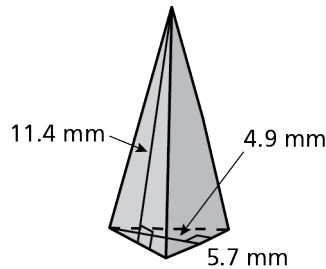
Grade 7

Prerequisite Skills Test (continued)

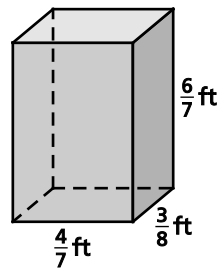
16. Find the area.



17. Find the surface area.



18. Find the volume.



19. Graph -2.4 and its opposite.

20. Complete the statement using $<$, $>$, or $=$. $-2\frac{1}{5}$ _____ $-2\frac{3}{5}$

21. Find $|45|$.

Graph the solution of the inequality.

22. $x - 2 \leq 4$

23. $9x \geq 9$

24. Is the question, “How tall is the tree in your yard?” a statistical question?

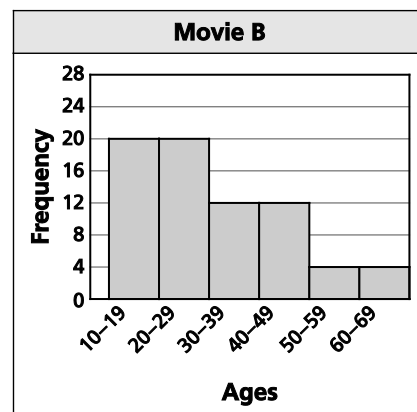
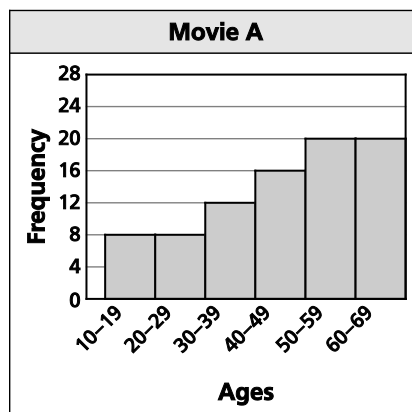
25. A group of five sixth-graders measure and record their heights. The heights (in inches) are 56, 57, 56, 61, and 60. Find the mean and the median of the heights.

26. Find the interquartile range of the data set 24, 25, 31, 40, 36, 20, 24, 31, 39, 25.

27. The data set 3, 4, 4, 4, 5, 5, 6, 7, 7, 10 shows the numbers of hours students volunteer for a community service project. Find and interpret the mean absolute deviation of the data set.

28. The histograms show the ages of people watching two movies in a theater.

- Describe the shape of each distribution.
- Which movie has younger viewers?



Prerequisite Skills Test Item Analysis

Item Number	Skills
1	dividing proper fractions
2	dividing mixed numbers
3	adding and subtracting decimals
4	multiplying decimals
5	dividing decimals
6	plotting equivalent ratio values
7	finding a unit rate
8	solving a unit rate problem involving pricing
9	converting units
10	solving a problem involving finding the whole
11	generating an equivalent expression
12	using variables to represent numbers and write equations
13	solving an equation of the form $x + p = q$
14	solving an equation of the form $px = q$
15	writing an equation
16	finding area
17	finding surface area
18	finding volume
19	positioning a number and its opposite on a number line
20	interpreting positions of rational numbers
21	finding absolute value
22	representing the solutions of an inequality on a number line
23	representing the solutions of an inequality on a number line
24	determining whether a question is a statistical question
25	finding measures of center of a data set
26	finding the interquartile range of a data set
27	finding the mean absolute deviation of a data set
28	describing the distributions of data sets