# Math Summer Work for Rising 6ᵗʰ Graders

Before entering 6ᵗʰ grade, please complete the following questions over the summer break. This assignment will be due on your first day of school, Thursday, August 15, 2024. Try your best to complete all problems and show your work when needed. This assignment will be a completion grade.

This assignment will cover the following concepts:

- Adding and subtracting whole numbers
- Adding and subtracting fractions and decimals
- Multiplying and dividing whole numbers
- Multiplying and dividing decimals and fractions
- Area, perimeter, and volume
- Plotting points on a coordinate plane
- Order of operations

# Pre-Course Test

Name _____

**Estimate the quotient.**

**1.** $59 \div 5$        **2.** $78 \div 8$        **3.** $101 \div 4$

**4.** Your school's science club is making gift baskets to sell. The club has 350 individually wrapped soaps to put into the gift baskets. The club wants to put 3 soaps in each gift basket. How many gift baskets can the club make?

**Divide.**

**5.** $322 \div 14$        **6.** $247 \div 19$        **7.** $154 \div 22$

**Add or subtract.**

**8.** $2.3 + 3.4$        **9.** $5.8 - 2.1$

**10.** $4.2 - 1.9$        **11.** $\dfrac{3}{4} - \dfrac{1}{3}$

**12.** $\dfrac{3}{8} + \dfrac{7}{8}$        **13.** $\dfrac{4}{9} + \dfrac{5}{6}$

**Estimate the sum or difference to the nearest whole number.**

**14.** $3.17 - 1.8$        **15.** $5.23 + 6.8$        **16.** $8.14 + 7.25$

**Complete the statement with <, >, or =.**

**17.** $1.007$ ____ $1.004$        **18.** $3.052$ ____ $3.055$

**19.** $4.61$ ____ $0.461$        **20.** $5.750$ ____ $5.75$

**21.** $7.34$ ____ $7.734$        **22.** $9.976$ ____ $9.76$

**Plot the ordered pair in the coordinate plane.**

**23.** $(2, 5)$        **24.** $(6, 1)$        **25.** $(0, 4)$

**Answers**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. ___ See left. ___
18. ___ See left. ___
19. ___ See left. ___
20. ___ See left. ___
21. ___ See left. ___
22. ___ See left. ___
23. ___ See left. ___
24. ___ See left. ___
25. ___ See left. ___

Name_____ Date _____
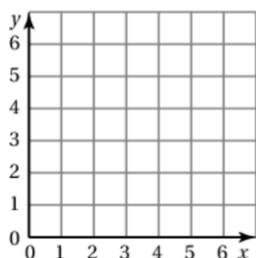
**Find the area of the rectangle.**

*Answers*

**26.**

4 cm

6 cm

**27.**

9 in.

11 in.
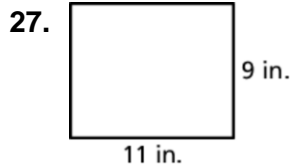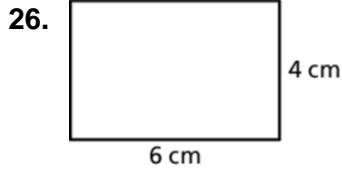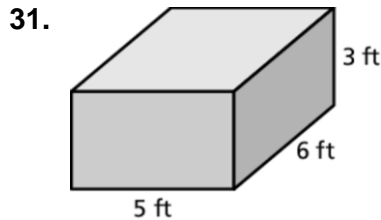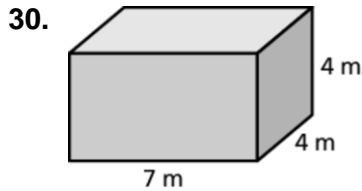
**28.** Your house is 1030 meters from school. Your friend's house is 1.5 kilometers from school. Whose house is farther from school?

**29.** How many vertices does a cube have?

**Find the volume of the rectangular prism.**

**30.**

4 m

4 m

7 m

**31.**

3 ft

6 ft

5 ft

**Tell whether the number is *prime* or *composite*.**

**32.** 532          **33.** 87          **34.** 41

**Multiply or divide.**

**35.** $16 \times 9$          **36.** $20 \times 17$          **37.** $135 \div 9$

**Simplify the expression.**

**38.** $15 - 4 \times 3$          **39.** $2 \times (8 + 7)$          **40.** $(9 + 9) + 7 \times 2$

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

38. _____

39. _____

40. _____

41. ____See left.____

**41.** The data show a class enrollment over a five-year period. Make a line graph to represent the data.

| Year | 1 | 2 | 3 | 4 | 5 |
|------|---|---|---|---|---|
| Class Enrollment | 22 | 24 | 23 | 20 | 19 |

# Pre-Course Test Item Analysis

| Item Number | Skills |
|---|---|
| 1 | rounding, dividing whole numbers |
| 2 | rounding, dividing whole numbers |
| 3 | rounding, dividing whole numbers |
| 4 | dividing whole numbers |
| 5 | dividing whole numbers |
| 6 | dividing whole numbers |
| 7 | dividing whole numbers |
| 8 | adding and subtracting decimals |
| 9 | adding and subtracting decimals |
| 10 | adding and subtracting decimals |
| 11 | adding and subtracting decimals |
| 12 | adding and subtracting decimals |
| 13 | adding and subtracting decimals |
| 14 | rounding decimals |
| 15 | rounding decimals |
| 16 | rounding decimals |
| 17 | comparing decimals |
| 18 | comparing decimals |
| 19 | comparing decimals |
| 20 | comparing decimals |
| 21 | comparing decimals |

| Item Number | Skills |
|---|---|
| 22 | comparing decimals |
| 23 | plotting ordered pairs in the first quadrant |
| 24 | plotting ordered pairs in the first quadrant |
| 25 | plotting ordered pairs in the first quadrant |
| 26 | finding the area of a rectangle |
| 27 | finding the area of a rectangle |
| 28 | converting and comparing within the metric system |
| 29 | knowing characteristics of a cube |
| 30 | finding the volume of a rectangular prism |
| 31 | finding the volume of a rectangular prism |
| 32 | identifying prime and composite numbers |
| 33 | identifying prime and composite numbers |
| 34 | identifying prime and composite numbers |
| 35 | multiplying and dividing whole numbers |
| 36 | multiplying and dividing whole numbers |
| 37 | multiplying and dividing whole numbers |
| 38 | simplifying numerical expressions |
| 39 | simplifying numerical expressions |
| 40 | simplifying numerical expressions |
| 41 | making a line graph |
| | |