Divine Child Junior High

Incoming 7th Grade Summer Reading Expectations

Reading during the summer…

-Builds vocabulary   -Models quality sentence structure   -Improves writing   -Fun!

-Increases reading stamina -Prevents a decline in reading level

What will you read?   **Only** one book is required

Required Summer Reading Novel: *The War That Saved My Life*
- *Novel by Kimberly Brubaker Bradley*

This novel will be assessed the week you return to school. Please have it finished by August 22, 2022

I encourage you to read more than one book over the summer. Here is a **suggested** list below. If/when choosing additional books, make sure it is at your lexile level (Grade level appropriate).
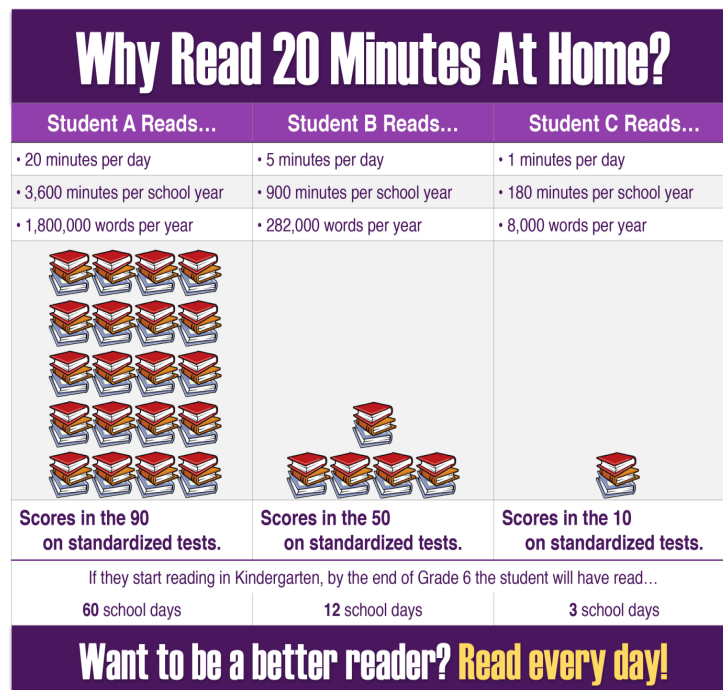
What you can't read:

Do not reading the following novels:

- The Giver by Lois Lowry
- The Outsiders by S.E. Hinton
- The Red Fern Grows by Wilson Rawls
- Girl, Stolen April Henry
- Tuck Everlasting by Natalie Babbitt
- Fever 1793 by Laurie Anderson

No repeats from your 6th grade class or your Reading Counts

Suggested Reading List

Book	Lexile
Soar	510
Rise of the Elgen	610
The Best Man	540
Troll Hunters	580
The Girl Who Drank the Moon	640
Terror at Bottle Creek	650
Booked	660
Number the Stars	670
The Book Thief	700
Lost in the Sun	700
The Scourge	740
The Night Parade	760
Listen, Slowly	800
All We Have Left	800
The Secret Keepers	820
Me and Miranda Mullaly	850
The Lie Tree	860
Roll of Thunder Hear My Cry	920
Thorn Ogres of Hagwood	1010
Ten Days of Madwoman	1210

Why Read 20 Minutes At Home?

Student A Reads...	Student B Reads...	Student C Reads...
• 20 minutes per day	• 5 minutes per day	• 1 minutes per day
• 3,600 minutes per school year	• 900 minutes per school year	• 180 minutes per school year
• 1,800,000 words per year	• 282,000 words per year	• 8,000 words per year
Scores in the 90 on standardized tests.	Scores in the 50 on standardized tests.	Scores in the 10 on standardized tests.

If they start reading in Kindergarten, by the end of Grade 6 the student will have read…

60 school days	**12** school days	**3** school days

Want to be a better reader? Read every day!

⇨ **According to Johns Hopkins University, the effects of summer learning loss can result in nearly a three-month loss in grade-level equivalency in math and a two-month loss in grade-level equivalency in reading. In order to close the summer learning loss gap in reading, middle school students will be** <u>expected to complete</u> **Summer Learning before they return in the fall.   Below are the expectations for** literacy. Thank you so much for supporting your child's development through summer learning.

READ TO SUCCEED
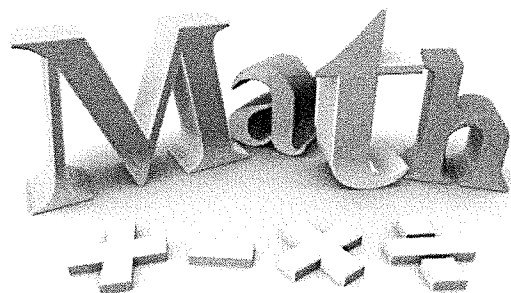
Dear Parents and Guardians,

To help students retain math concepts and skills learned this school year, a summer math packet has been created for your child. The packet contains practice that will review, maintain, and reinforce the skills and concepts introduced, developed, and mastered during the school year. Parent participation to review the student's work is encouraged. If your child is having trouble with a particular concept, please do an internet search using the title of the math page. There are many helpful math tutorial videos available, especially by Khan Academy or Math Antics. The summer math packet is to be completed throughout the summer. It is not meant to be completed before school is out this year or just before school starts in the fall. We have created this packet with the intention that your student will complete 2 pages of math per week. Students benefit from completing the packet a little bit at a time. Please have your child turn in the math packet to the homeroom teacher or math teacher during the first full week of school in the fall.

In addition, students are also welcome to use Freckle during the months of June and July. Through the last day of July, students can use the same class code they have used during this school year and the work presented will be tailored to him/her based on STAR test data. Freckle will find and help fill learning gaps with adaptive differentiated instruction. This will help them be MATHTASTIC!
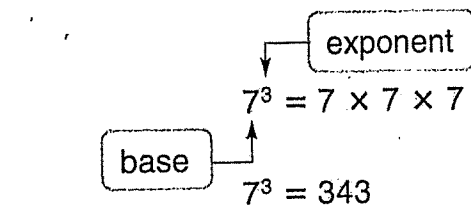
Have a blessed, fun and safe summer!

Exponents

An *exponent* tells how many times to use the *base* as a factor.

exponent

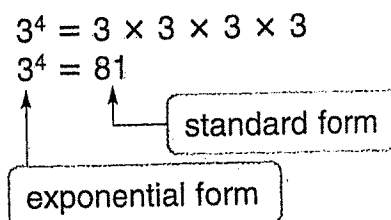$7^3 = 7 \times 7 \times 7$

base

$7^3 = 343$

Read 7^3 as:
"7 cubed,"
"7 to the third power," or
"the third power of 7."

$3^4 = 3 \times 3 \times 3 \times 3$
$3^4 = 81$

standard form

exponential form

Write each product in exponential form.

1. $5 \times 5 \times 5 \times 5 \times 5 \times 5$ 2. $21 \times 21 \times 21 \times 21$ 3. $3 \times 3 \times 3 \times 3 \times 3$

_____   _____   _____

4. $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7$ 5. $12 \times 12 \times 12 \times 12 \times 12 \times 12 \times 12 \times 12$

_____   _____

Write the standard form for each.

6. 8^4 7. 9^2 8. 5^3 9. 6^0

_____   _____   _____   _____

10. 13 cubed   11. 9 to the 4th power   12. 16 squared   13. the 2nd power of 18

_____   _____   _____   _____

Write the missing exponents.

14. $8^x = 64$ 15. $12^y = 1$ 16. $10^n = 100{,}000$ 17. $11^a = 1331$

_____   _____   _____   _____

Compare. Write <, =, or >.

18. 3^5 _____ 4^3 19. 2^4 _____ 4^2 20. 5^4 _____ 25^1 21. 8^3 _____ 22^2

Problem Solving

22. There are 5^5 students at West High School and 4^6 students at East High School. How many students are at both schools combined?

_____

18

Ⓒ Use with Lesson 2-5, pages 74–75 in the Student Book.
Then go to Lesson 2-6, pages 76–77 in the Student Book

Evaluate Algebraic Expressions

Name _____

Date _____

2

Evaluate $8 + x^4 - k$, when $x = 3$ and $k = 6$.

$8 + 3^4 - 6$ ← Replace x with 3 and k with 6.

$8 + 81 - 6$ ← Simplify using the order of operations.

$89 - 6$ ←

83 ← value of the expression

Evaluate $2y + 15 - 0.5y$, when $y = 5$.

$(2y - 0.5y) + 15$ ← Combine like terms.

$1.5y + 15$ ← Simplify.

$1.5 \cdot 5 + 15$ ← Replace y with 5.

22.5 ← value of the expression

Evaluate each expression.

1. $95 - a(b + c)$, when $a = 9$, $b = 3$, and $c = 7.4$ _____

2. $(j - 2)^3 + k \div l$, when $j = 9$, $k = 4.5$, and $l = 3$ _____

3. $(1.42 + t) \times u + \dfrac{0.42}{v}$, when $t = 13.5$, $u = 7$, and $v = 6$ _____

4. $(g + h \times 7)^2 - 12i$, when $g = 8$, $h = 1$, and $i = 3$ _____

Simplify by combining like terms. Then evaluate the expression for the given value of the variable.

5. $30y - 5y - 8$, when $y = 3$ _____

6. $9g^3 + 8g^3 + 743$, when $g = 2$ _____

7. $6s^4 - 9s^2 - 2s^4$, when $s = 5$ _____

8. $17p + 8p - 91 + 12q$, when $p = 11$ and $q = 9$ _____

Problem Solving Write and evaluate an algebraic expression.

9. Dora buys some T-shirts for $8.75 each and a pair of shoes for $27.50. If she buys 4 T-shirts, how much money does she spend in all?

_____

10. Rich buys 3 packages of paper plates for the carnival. He also rents a picnic table for $180. How much money does Rich spend in all if the paper plates cost $1.95 per package?

_____

Multiply and Divide by Positive Powers of Ten (A)

Find each product or quotient.

$9.15 \div 10^3 =$

$9.7 \times 10^1 =$

$0.3 \div 10^3 =$

$2.134 \div 10^2 =$

$2.4784 \times 10^3 =$

$2.318 \div 10^3 =$

$5.615 \div 10^1 =$

$7.5077 \div 10^3 =$

$9.8116 \times 10^2 =$

$7.7169 \div 10^1 =$

Converting Fractions (A)

Name: _____

Date: _____

Convert mixed to improper fractions and improper to mixed fractions.

$\frac{10}{3} = \ \ -$

$\frac{19}{4} = \ \ -$

$1\frac{5}{9} = \ -$

$\frac{82}{15} = \ -$

$4\frac{11}{12} = \ -$

$1\frac{5}{12} = \ -$

$4\frac{9}{10} = \ -$

$6\frac{5}{7} = \ -$

$9\frac{8}{15} = \ -$

$1\frac{7}{9} = \ -$

$\frac{43}{7} = \ \ -$

$6\frac{1}{6} = \ -$

$8\frac{2}{9} = \ -$

$\frac{97}{10} = \ \ -$

$1\frac{3}{10} = \ -$

$\frac{49}{5} = \ \ -$

4

Find the value of each expression in lowest terms.

1. $\frac{7}{4} - \frac{8}{5}$ 5. $\frac{3}{2} - \frac{9}{7}$ 9. $\frac{4}{3} - \frac{2}{5}$

2. $\frac{23}{2} + \frac{9}{4}$ 6. $\frac{7}{10} + \frac{2}{5}$ 10. $\frac{5}{2} + \frac{2}{3}$

Adding and Subtracting Mixed Fractions (A)

Find the value of each expression in lowest terms.

1. $2\frac{1}{5} + 1\frac{3}{4}$ 5. $1\frac{1}{2} + 2\frac{3}{5}$ 9. $3\frac{1}{2} - 1\frac{1}{2}$

2. $3\frac{1}{2} - 2\frac{2}{3}$ 6. $3\frac{1}{2} - 2\frac{5}{9}$ 10. $5\frac{1}{2} + 5\frac{1}{4}$

5

Multiplying and Dividing Fractions (A)

Find the value of each expression in lowest terms.

1. $\frac{1}{2} \times \frac{5}{4}$

6. $\frac{1}{4} \times \frac{5}{3}$

11. $\frac{10}{3} \times \frac{11}{6}$

2. $\frac{1}{6} \div \frac{8}{11}$

7. $\frac{11}{2} \div \frac{1}{2}$

12. $\frac{1}{2} \div \frac{1}{2}$

3. $\frac{1}{3} \div \frac{13}{9}$

8. $\frac{4}{3} \div \frac{11}{12}$

13. $\frac{14}{9} \times \frac{7}{10}$

Multiplying and Dividing Mixed Fractions (A)

Find the value of each expression in lowest terms.

1. $3\frac{2}{7} \div 1\frac{1}{4}$

6. $1\frac{1}{3} \times 1\frac{2}{3}$

11. $1\frac{3}{8} \div 1\frac{1}{12}$

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

7. $1\frac{1}{3} \times 2\frac{1}{5}$

12. $2\frac{7}{8} \div 5\frac{1}{2}$

3. $2\frac{1}{4} \div 1\frac{1}{2}$

8. $2\frac{1}{7} \div 2\frac{1}{2}$

13. $3\frac{2}{3} \div 1\frac{1}{6}$

Addition Equations

Name _____

Date _____

Solve: $38.6 = h + 5.7 + 19.8$

$38.6 = h + 5.7 + 19.8$ ← Simplify by adding the numbers on one side.

$38.6 = h + 25.5$

$38.6 - 25.5 = h + 25.5 - 25.5$ ← Subtract 25.5 from both sides to isolate the variable.

$13.1 = h$

Solve and check.

1. $7 + y = 25$

2. $1.5 = s + 0.3$

3. $p + 22 = 64$

4. $50 = b + 25$

5. $p + 86 = 100$

6. $x + 0.5 = 1$

7. $h + \$3.85 = \$7.50$

8. $k + 7 = 77$

9. $r + \$.80 = \$1.80$

10. $\$18.50 + a = \$30$

11. $1.09 + b = 4.6$

12. $d + 10.1 = 92$

Subtraction Equations

Name _____

Date _____

Solve: $s - 23.5 = 82$

$s - 23.5 + 23.5 = 82 + 23.5$ ← Add 23.5 to both sides to isolate the variable.

$s = 105.5$

Check:

$105.5 - 23.5 = 82$

$82 = 82$ True

Solve and check.

1. $d - 6 = 33$

2. $12 = z - 10$

3. $\$45.58 - e = \$19.95$

4. $f - 4.1 = 8.6$

5. $j - \$2.10 = \$7.01$

6. $a - 15 = 0$

7. $h - 53 = 25$

8. $c - 72 = 34$

9. $b - 82.6 = 6.45$

10. $u - \$4.87 = \$.12$

11. $m - 19 = 11$

12. $v - (\$0.65 + \$5.74) = \$8.53$

13. $g - 4.7 = 5.91$

14. $y - 104 = 23$

15. $187 = t - (704 + 59)$

16. $73.4 = k - 62.7$

17. $h - 37 = 279$

18. $(6.13 + 2.46) - s = 3.86$

Multiplication and Division Equations

Name _____

Date _____

Solve: $4n = 36$

- Divide both sides by 4 to isolate the variable.

$$4n \div 4 = 36 \div 4$$
$$n = 9$$

Solve: $x \div 5 = 3.45$

- Multiply both sides by 5 to isolate the variable.

$$x \div 5 \cdot 5 = 3.45 \cdot 5$$
$$x = 17.25$$

Solve and check.

1. $r \div 6 = 10$ _____

2. $8 \cdot w = 120$ _____

3. $15 = \frac{e}{0.5}$ _____

4. $8m = 40$ _____

5. $x \div 6 = 6$ _____

6. $9 = t \div 8$ _____

7. $12 = \frac{1}{2}x$ _____

8. $\frac{b}{5} = 15$ _____

9. $3 = \frac{s}{0.3}$ _____

10. $\frac{y}{19} = \$85$ _____

11. $\frac{\$385}{k} = \$5$ _____

12. $h \cdot \$250 = \$50$ _____

13. $720 = 9t$ _____

14. $4.15 = \frac{c}{0.13}$ _____

15. $4.52u = 31.64$ _____

16. $d \div 23 = 6.2$ _____

17. $9.12 \div s = 2.4$ _____

18. $324 = 4a$ _____

Write and solve an equation.

19. A number m divided by 3.25 is equal to 64.

    _____

20. Four tenths multiplied by a number z is equal to six and five tenths.

    _____

21. The quotient of a number n and seventeen is two hundred eighty-three.

    _____

22. The factors are twenty-one and g. The product is forty-eight and three tenths.

    _____

Problem Solving Write an equation for each. Then solve.

23. Hank bought 5 CDs for $64.75. If each CD cost the same price, how much did each cost?

    _____

24. It is 25.8 miles from Sandra's house to her grandparents' house. This is one fourth the distance from Sandra's house to her cousins' house. How far is it from Sandra's to her cousins'?

    _____

42

C Use with Lesson 4-7, pages 134–135 in the Student Book.
C Then go to Lesson 4-7A, pages 219–220 in this Workbook.

Addition and Subtraction Equations with Fractions

Solve: $d + 3\frac{1}{9} + 5\frac{4}{9} = 10\frac{8}{9}$

- Simplify by adding the numbers on one side.
- Subtract $8\frac{5}{9}$ from both sides to isolate the variable.
- Simplify.

$$d + 8\frac{5}{9} = 10\frac{8}{9}$$

$$d + 8\frac{5}{9} - 8\frac{5}{9} = 10\frac{8}{9} - 8\frac{5}{9}$$

$$d = 2\frac{3}{9} = 2\frac{1}{3}$$

Solve equations with fractions the same way as with whole numbers.

Solve and check.

1. $6\frac{2}{9} + x = 12\frac{2}{3}$

2. $5\frac{1}{6} - u = 2\frac{3}{4}$

3. $g + 9\frac{3}{4} = 15\frac{1}{2}$

4. $h - 9\frac{6}{7} = 5\frac{3}{7}$

5. $6\frac{2}{9} + r = 10\frac{1}{2}$

6. $s - \frac{5}{6} = 9\frac{2}{5}$

7. $2\frac{2}{3} + a = 7\frac{1}{8}$

8. $n - 6\frac{1}{4} = 3\frac{5}{6}$

9. $c + 1\frac{7}{8} = 12\frac{1}{2}$

Multiplication and Division Equations with Fractions

Solve: $d \div \frac{4}{5} = 12\frac{1}{2}$

$$d \div \frac{4}{5} \times \frac{4}{5} = 12\frac{1}{2} \times \frac{4}{5} \longleftarrow \boxed{\text{Isolate the variable.}}$$

$$d = \frac{25}{2} \times \frac{4}{5} \longleftarrow \boxed{\text{Compute to solve.}}$$

$$d = \frac{\overset{5}{\cancel{25}}}{\underset{1}{\cancel{2}}} \times \frac{\overset{2}{\cancel{4}}}{\underset{1}{\cancel{5}}} = \frac{10}{1}$$

$$d = 10$$

Solve: $\frac{2}{5}f + \frac{2}{5}f = \frac{9}{10}$

$$\frac{4}{5}f = \frac{9}{10} \longleftarrow \boxed{\text{Combine like terms.}}$$

$$\frac{4}{5}f \div \frac{4}{5} = \frac{9}{10} \div \frac{4}{5} \longleftarrow \boxed{\text{Isolate the variable.}}$$

$$f = \frac{9}{10} \times \frac{5}{4} \longleftarrow \boxed{\text{Compute to solve.}}$$

$$f = \frac{9}{\underset{2}{\cancel{10}}} \times \frac{\cancel{5}}{4} = \frac{9}{8}$$

$$f = 1\frac{1}{8}$$

Solve for x.

1. $\frac{2}{5}x = 48$ _____

2. $35x = \frac{7}{10}$ _____

3. $x \div \frac{7}{8} = 64$ _____

4. $x \div 8\frac{8}{9} = 9$ _____

5. $6\frac{1}{3}x = 2\frac{1}{2}$ _____

6. $x \div 1\frac{1}{4} = 3\frac{3}{5}$ _____
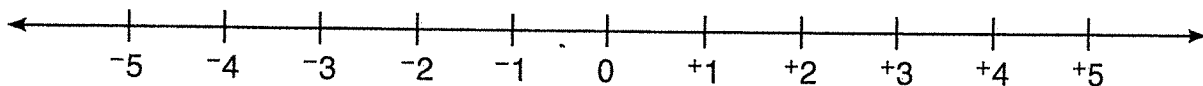
7. $\frac{6}{11}x = 7\frac{1}{5}$ _____

8. $x \div 3\frac{3}{4} = 1\frac{7}{25}$ _____

9. $\frac{4}{9}x = \frac{8}{27}$ _____

Compare and Order Integers

Name _____

Date _____

9

Compare integers
- Any integer is less than an integer to its right: ⁻4 < ⁻2
- Any integer is greater than an integer to its left: ⁻1 > ⁻5

Order integers
- Least to greatest: ⁻5, ⁻1, ⁺2
  Begin with integer farthest to the left.
- Greatest to least: ⁺2, ⁻1, ⁻5
  Begin with the integer farthest to the right.

Circle the greater integer. Use a number line to help.

1. ⁺8, ⁺6   2. ⁻1, ⁻4   3. ⁻3, ⁺2   4. ⁺5, ⁻5

5. ⁻6, ⁻7   6. ⁻3, 0   7. ⁺1, ⁻4   8. 0, ⁺4

Compare. Write <, =, or >.

9. ⁺6 ___ ⁺10   10. ⁻6 ___ ⁻3   11. ⁺10 ___ ⁺10   12. ⁻2 ___ 0

13. ⁺5 ___ 0   14. ⁻7 ___ ⁺7   15. ⁺4 ___ ⁻4   16. ⁺3 ___ ⁻1

17. ⁺7 ___ ⁻4   18. ⁺9 ___ 0   19. ⁻5 ___ ⁺2   20. 0 ___ 0

21. ⁺2 ___ ⁺8   22. ⁻5 ___ ⁻1   23. ⁻6 ___ ⁻3   24. ⁺4 ___ 0

Write in order from least to greatest.

25. 0, ⁻2, ⁺4 _____   26. ⁻4, ⁺6, ⁺5 _____

27. ⁺10, ⁻2, ⁺6 _____   28. ⁻1, ⁻9, ⁻8, ⁺2 _____

29. ⁻7, 0, ⁻3, ⁺2 _____   30. ⁺4, ⁻1, ⁻6 _____

31. ⁻2, ⁻8, ⁻6, ⁻3 _____   32. ⁺7, ⁺5, ⁺1, ⁺3 _____

Write in order from greatest to least.

33. ⁻7, ⁺4, ⁻5 _____   34. ⁻9, ⁻10, ⁻4 _____

35. 0, ⁻6, ⁻11 _____   36. ⁺3, ⁺5, ⁺9 _____

37. ⁺2, ⁻5, ⁺8, ⁻1 _____   38. ⁻3, ⁺8, 0, ⁻1 _____

39. 0, ⁻17, ⁺2, ⁻5 _____   40. ⁺1, ⁻8, ⁺9, ⁻6 _____

48

Use with Lesson 5-2, pages 152–153 in the Student Book.
Then go to Lesson 5-2A, pages 223–224 in this Workbook.

Converting Fractions (A)

Name: _____   Date: _____

Fill in the missing values. Use part-to-**whole** ratios.

	Fraction	Decimal	Percent	Ratio
1.	$\frac{1}{2}$			
2.	$\frac{9}{10}$			
3.	$\frac{3}{10}$			
4.	$\frac{4}{5}$			
5.	$\frac{3}{4}$			
6.	$\frac{13}{20}$			
7.	$\frac{5}{8}$			
8.	$\frac{2}{5}$			
9.	$\frac{3}{8}$			
10.	$\frac{1}{4}$			

Solve Proportions

Solve the proportion: $\frac{n}{16} = \frac{5}{20}$.

Extremes   Means

$\frac{n}{16} \times \frac{5}{20}$ ⟶ $n \times 20 = 16 \times 5$

$20n = 80$

$20n \div 20 = 80 \div 20$

$n = 4$

Check:

$\frac{4}{16} \overset{?}{=} \frac{5}{20}$ ⟶ $4 \times 20 = 16 \times 5$

$80 = 80$

Complete to find the missing term in each proportion.

1. $\frac{n}{8} = \frac{30}{48}$ ⟶ $n \times 48 = 8 \times 30$

$48n = 240$

$48n \div \text{_____} = 240 \div \text{_____}$

$n = \text{_____}$

2. $\frac{7}{n} = \frac{21}{30}$ ⟶ $7 \times 30 = n \times 21$

$210 = 21n$

$210 \div \text{_____} = 21n \div \text{_____}$

$\text{_____} = n$

Find the missing term in each proportion.

3. $\frac{n}{3} = \frac{10}{15}$ _____

4. $\frac{9}{10} = \frac{n}{40}$ _____

5. $\frac{n}{4} = \frac{9}{6}$ _____

6. $\frac{8}{40} = \frac{n}{20}$ _____

7. $\frac{6}{7} = \frac{n}{21}$ _____

8. $\frac{6}{9} = \frac{12}{n}$ _____

9. $\frac{8}{12} = \frac{n}{24}$ _____

10. $\frac{3}{n} = \frac{24}{16}$ _____

11. $\frac{n}{6} = \frac{35}{42}$ _____

12. $\frac{2}{n} = \frac{5}{10}$ _____

13. $\frac{3}{4} = \frac{n}{48}$ _____

14. $\frac{16}{20} = \frac{48}{n}$ _____

Find the value of a.

15. $4:a = 16:24$ _____

16. $a:7 = 7:49$ _____

17. $8:3 = a:12$ _____

18. $5:a = 15:21$ _____

19. $2:9 = 16:a$ _____

20. $a:12 = 15:60$ _____

21. $0.2:4 = a:16$ _____

22. $a:9 = 0.3:27$ _____

23. $15:5 = 4.5:a$ _____

Circle the letters of the two ratios that form a proportion.

24. a. $\frac{1}{3}$ b. $\frac{1}{6}$ c. $\frac{2}{6}$

25. a. $\frac{3}{8}$ b. $\frac{5}{6}$ c. $\frac{10}{12}$

26. a. $\frac{5}{10}$ b. $\frac{10}{15}$ c. $\frac{1}{2}$

27. a. $\frac{12}{30}$ b. $\frac{2}{5}$ c. $\frac{6}{5}$

28. a. $\frac{7}{8}$ b. $\frac{21}{24}$ c. $\frac{14}{21}$

29. a. $\frac{28}{30}$ b. $\frac{35}{50}$ c. $\frac{7}{10}$

30. a. $\frac{18}{81}$ b. $\frac{3}{14}$ c. $\frac{2}{9}$

31. a. $\frac{4}{16}$ b. $\frac{1}{4}$ c. $\frac{1}{8}$

Discount and Sale Price

Name _____

Date _____

A book that costs $26.00 is being sold at a 30% rate of discount.
What is the discount? What is the sale price?

| Discount = Rate of Discount × List Price | | Sale Price = List Price − Discount |

$D = 30\%$ of $26.00
$D = 0.30 \times \$26.00$
$D = \$7.80$

$SP = \$26.00 - \$7.80$
$SP = \$18.20$

The discount on the book is $7.80.

The sale price of the book is $18.20.

Find the discount and sale price.

	Item	List Price	Rate of Discount	Discount	Sale Price
1.	Sweater	$80	25%		
2.	CD	$14	20%		
3.	Poster	$33	15%		
4.	Jacket	$120	12%		
5.	Computer	$1800	8%		

Sales Tax and Total Cost

Name _____

Date _____

A shirt costs $38.95 plus 6% sales tax. What is the total cost?

| Sales Tax = Rate of Sales Tax × Marked Price | | Total Cost = Marked Price + Sales Tax |

$T = 6\%$ of $38.95
$T = 0.06 \times \$38.95$
$T = 2.337 \approx \$2.34.$

$TC = \$38.95 + \$2.34$
$TC = \$41.29$

The sales tax is $2.34.

The total cost of the shirt is $41.29.

Find the sales tax and the total cost.

	Item	Marked Price	Rate of Sales Tax	Sales Tax	Total Cost
1.	Softball	$7.98	4%		
2.	Glove	$45.25	6%		
3.	Wooden Bat	$23.50	2%		
4.	Thermos	$18	5%		
5.	Jersey	$59.95	7%		

Better Buy

Name _____

Date _____

Pens cost 4 for $4.41 or 6 for $6.03. Which is the better buy?

$$\frac{4}{\$4.41} = \frac{1}{n}$$

$$4 \times n = \$4.41 \times 1$$
$$4n \div 4 = \$4.41 \div 4$$
$$n = \$1.1025$$
$$n \approx \$1.10$$

$$\frac{6}{\$6.03} = \frac{1}{m}$$

$$6 \times m = \$6.03 \times 1$$
$$6m \div 6 = \$6.03 \div 6$$
$$m = \$1.005$$
$$m \approx \$1.01$$

To decide which is the better buy, find each unit cost. Then compare them.

$$\$1.01 < \$1.10$$

So 6 pens for $6.03 is a better buy.

Which is the better buy? Explain.

1. 3 apples for $.75
9 apples for $2.00

_____

2. 4 cans of juice for $3.20
A 6-pack for $4.45

_____

3. 1 pair of socks for $1.35
3 pairs for $4.69

_____

4. 1 dozen roses for $15.25
$1.25 per rose

_____

5. 8-oz can for 48¢
6-oz can for 42¢

_____

6. 2-lb box for $1.84
5-lb box for $4.50

_____

Estimate using compatible numbers to find the better buy.

7. 1 pair of socks for $2.50
3 pairs for $9.65

_____

8. 1 can of juice for $.85
6 cans of juice for $4.75

_____

9. 1 dozen rolls for $3.58
Rolls: 35¢ each

_____

10. 1 orange for $.35
Bag of 6 oranges for $2.50

_____

11. 1 dozen pencils for $3.56
36¢ for 1 pencil

_____

12. 10-oz box of cereal for $3.10
15-oz box of cereal for $2.99

_____

Problem Solving Tell which is the better buy for each.

13. A pair of jeans at Fine Fitters costs $19.95. The same jeans sell at Custom Clothes for 2 pairs for $38.95.

_____

14. Soap sells for $2.15 a bar, or one box of 5 bars for $10.95.

_____

15. An 8-oz can of mixed fruit costs $.83. A 14-oz can costs $1.38.

_____

16. A package of 4 glasses costs $2.98. A package of 6 of the same glasses costs $4.68.

_____

C Use with Lesson 12-9, pages 430–431 in the Student Book.
Then go to Lesson 12-10, pages 432–433 in the Student Book.

Mean, Mode, Median, and Range

1) 63, 54, 50, 82, 75, 39, 33, 91, 37, 96

Mean ____ Median ____ Mode _____ Range ____

2) 98, 97, 59, 50, 42, 91, 83, 32

Mean ____ Median ____ Mode _____ Range ____

3) 36, 61, 55, 74, 17, 89, 72, 68, 63, 87, 37, 13

Mean ____ Median ____ Mode _____ Range ____

4) 53, 53, 25, 42, 21, 37, 86, 27

Mean ____ Median ____ Mode _____ Range ____

5) 45, 16, 78, 78, 57, 84, 67, 55, 87

Mean ____ Median ____ Mode _____ Range ____

6) 86, 59, 58, 91, 30, 73, 51, 77, 44, 17, 85

Mean ____ Median ____ Mode _____ Range ____

7) 35, 76, 82, 25, 54, 89, 90, 22, 28, 59

Mean ____ Median ____ Mode _____ Range ____

8) 44, 90, 89, 45, 82, 88, 38

Mean ____ Median ____ Mode _____ Range ____

9) 54, 69, 18, 96, 25, 33, 30, 32, 95, 76, 56, 28

Mean ____ Median ____ Mode _____ Range ____

10) 51, 14, 15, 95, 47, 81, 24, 97, 71

Mean ____ Median ____ Mode _____ Range ____

Solid Figures

Name _____

Date _____
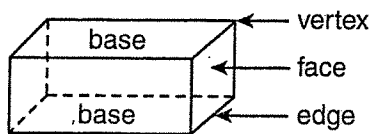
Pyramids and prisms other than cubes are named by the shape of their bases.

Cylinders, cones, and spheres have curved surfaces.

Complete the table.

	Solid Figure	Number of		
		Faces	Vertices	Edges
1.	square pyramid			
2.	rectangular pyramid			
3.	pentagonal prism			
4.	triangular pyramid			
5.	rectangular prism			
6.	pentagonal pyramid			
7.	hexagonal prism			
8.	triangular prism			
9.	hexagonal pyramid			

Write the solid figure that can be made from each net.

10.

_____

11.

_____

12.

_____
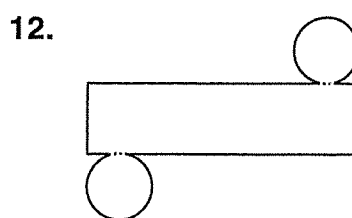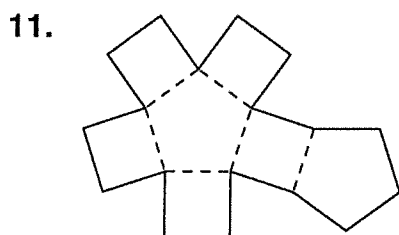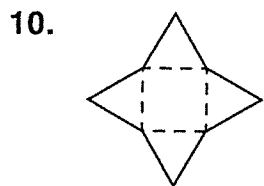
Write *True* or *False* for each statement.

13. A square pyramid and a rectangular pyramid have the same number of faces and edges. _____

14. Three of the faces of a triangular prism are rectangles. _____

15. A hexagonal prism has 8 hexagonal faces. _____

16. A triangular pyramid has 4 triangular faces. _____

17. The base of a cube is a square. _____

18. The number of edges on a cube is triple the number of its faces. _____

Use with Lesson 12-8, text pages 396–397.

Surface Area of Pyramids and Triangular Prisms

Name _____

Date _____

Square Pyramid	Triangular Prism

$S = 4(A_{triangle}) + A_{square}$	$S =$ Area of bottom face
	     + Area of rectangular front and back faces
	     + Area of triangular bases

Find the surface area of each figure.

1.

10 cm

8 cm

8 cm

_____

2.

8 ft

2.6 ft

2.6 ft

_____

3.

5 yd

$1\frac{1}{3}$ yd

$1\frac{1}{3}$ yd

_____

4.

9.7 in.

9 in.

15 in.

7 in.

_____

5.

3.7 cm

3.4 cm

6.8 cm

2.9 cm

_____

6.

$18\frac{3}{5}$ mm

17 mm

$22\frac{1}{2}$ mm

15 mm

_____
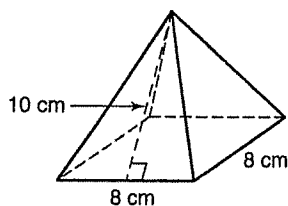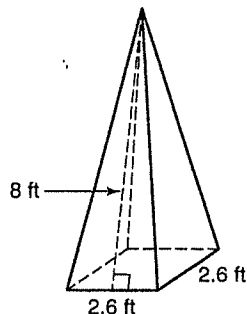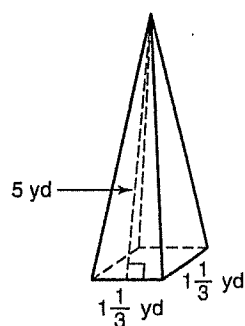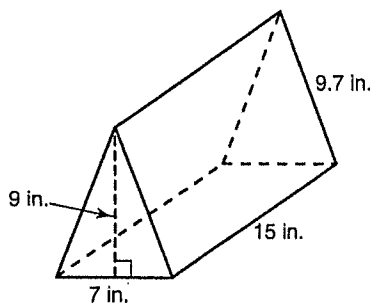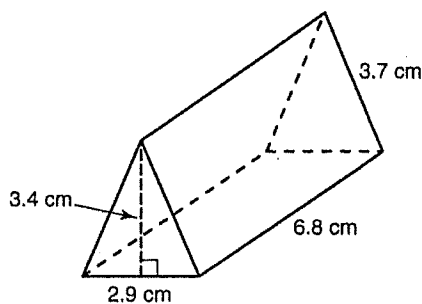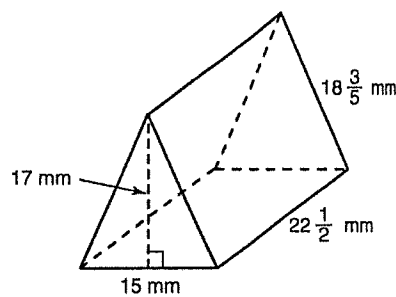
Find the surface area of each rectangular prism.

8.

3 ft

6 ft

8 ft

_____

9.

4 in.

2 in.

10 in.

_____

10.

2 m

3 m

9 m

_____
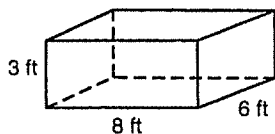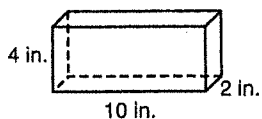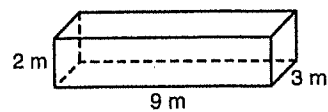
11. $\ell = 12$ dm

$w = 4$ dm

$h = 5$ dm

12. $\ell = 7.1$ m

$w = 4$ m

$h = 2.3$ m

13. $\ell = 5$ ft

$w = 2\frac{1}{2}$ ft

$h = 4$ ft

14. $\ell = 6$ yd

$w = 3\frac{1}{3}$ yd

$h = 2\frac{1}{2}$ yd