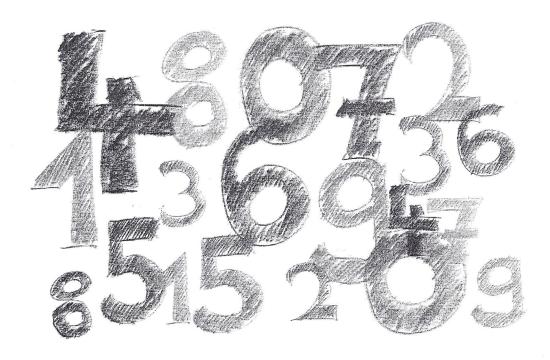Name : _____

6th Grade

Summer Math Packet

2019

Name _____   Date _____

Place Value Through Thousandths   Week 1

Write each in standard form.

1. two hundredths _____

2. seventy-five thousandths _____

3. four hundred sixteen thousandths _____

4. twenty and three tenths _____

5. one and thirty-two hundredths _____

6. five hundred three thousandths _____

7. twelve and eleven hundredths _____

8. two hundred fourteen thousandths _____

Write each decimal in words.

9. 0.52   10. 0.023   11. 0.408

_____   _____   _____

12. 10.3   13. 2.014   14. 8.21

_____   _____   _____

Write the value of the underlined digit in words.

15. 34.1<u>2</u>   16. 10.16<u>4</u>   17. 5.<u>7</u>82

_____   _____   _____

Test Prep

18. Which underlined digit has the value four hundredths?

   A 20.4<u>5</u>3   C 2.3<u>4</u>8

   B <u>4</u>36.72   D 1.00<u>4</u>

19. Oak trees grow 0.055 inches a day. Write the decimal in words.

   _____

Use with text pages 14–15.

Algebra: Order of Operations

Simplify.

1. $(20 - 2) \div 3$

_____

2. $4 + (8 - 2) \times 5$

_____

3. $6 + (2 \times 6) \div 2^2$

_____

4. $(19 + 2) \div (9 - 2) \times 4$

_____

5. $(3^2 - 6) \times (10 + 5)$

_____

6. $4 + (6 \times 2) - 7$

_____

7. $135 - 3 - (4 \times 12) + 16$

_____

8. $(9 - 5)^2 - (6 - 2) \times 3$

_____

9. $1,634 + (14 \times 2) \div 2^2$

_____

Write $>$, $<$, or $=$ for each $\bigcirc$.

10. $22 + (16 - 8) \bigcirc (22 + 16) - 8$

11. $32 + (4 \times 2) \bigcirc (32 + 4) \times 2$

12. $(36 \div 4) - 3^2 \bigcirc 16 - (3 \times 4)$

13. $(12 \times 3) + 2^2 \bigcirc (18 \div 3)^2 + 8$

14. $2,578 + (456 - 12) \bigcirc (2,578 + 456) - 12$

15. $(3^2 - 4) \times 8 \bigcirc (18 + 2) + 2^2 \times 2$

Mental Math   Use mental math to simplify.

16. $5 + (8 - 2) - 6$ _____

17. $(12 - 2) + (5 + 5) + (6 + 4)$ _____

18. $8 + 18 - (4 \times 2)$ _____

19. $(7 \div 7) \times (8 \div 8) \times (9 \div 9)$ _____

Algebra • Expressions   Evaluate the expression, given $x = 3$ and $y = 7$.

20. $(x + y)^2$ _____

21. $(2x + 6y) \div x$ _____

Test Prep

22. Which answer shows the expression $44 + 12 \div 2 - 2^2 \times 2$ correctly simplified using the order of operations?

   A 20   C 42

   B 24   D 48

23. Rewrite the expression $28 - 3 \times 4 + 3^2$. Put in parentheses to show the correct order of operations. Simplify the expression.

   _____

34

Use with text pages 124–127.

Name _____   Date _____

One-Digit Divisors

Divide.

1. $7\overline{)641}$ 2. $5\overline{)475}$ 3. $4\overline{)2,979}$ 4. $9\overline{)7,582}$

5. $5\overline{)82,345}$ 6. $8\overline{)73,691}$ 7. $7\overline{)862,715}$ 8. $4\overline{)632,524}$

9. $728 \div 6$ 10. $568 \div 4$ 11. $7,324 \div 2$ 12. $5,267 \div 7$

_____   _____   _____   _____

13. $23,456 \div 8$ 14. $74,114 \div 9$ 15. $217,422 \div 4$ 16. $952,431 \div 3$

_____   _____   _____   _____

Algebra • Equations The division statement $16 \div 5 = 3$ R1 can be written as $(5 \times 3) + 1 = 16$. Write and solve a division statement for each equation.

17. $4a + r = 19$
    $19 \div 4 = 4R3$

18. $5a + r = 33$
    $33 \div 5 = 6R3$

19. $6a + r = 19$
    $19 \div 6 = 3R1$

Test Prep

20. Al works in a nursery. He plants 486 seedlings in rows. He plants 9 seedlings in each row. Which answer shows how many rows he plants?

    A 34 rows   C 54 rows

    B 46 rows   D 62 rows

21. Al plants 335 rose bushes. He plants 8 in each row. How many rows does he plant? How many rose bushes are in the last row?

    _____

Use with text pages 88–89.

Division With Greater Numbers

Divide.

1. $24\overline{)7,230}$

2. $18\overline{)3,450}$

3. $68\overline{)6,345}$

4. $72\overline{)7,368}$

5. $37\overline{)8,023}$

6. $93\overline{)28,336}$

7. $82\overline{)55,362}$

8. $24\overline{)18,095}$

9. $35\overline{)81,121}$

10. $4,233 \div 11$

_____

11. $9,721 \div 58$

_____

12. $21,946 \div 36$

_____

13. $12,480 \div 51$

_____

14. $387,422 \div 16$

_____

15. $725,678 \div 82$

_____

16. $67,238 \div 321$

_____

17. $74,915 \div 812$

_____

18. $15,278 \div 426$

_____

Algebra • Equations   If q is the quotient and r is the remainder, write and solve a division problem for each equation.

19. $36q + r = 2,599$

20. $12q + r = 448$

21. $40q + r = 15,496$

Test Prep

22. Louisa earns $48,880 a year. There are 52 weeks in a year. How much does she earn a week?

   A $94

   B $840

   C $940

   D $1,040

23. Find $72,450 \div 85$. Show how to check your work.

_____

Use with text pages 120–123.

Name _____ Date _____

Add Fractions With Unlike Denominators

Add. Write each sum in simplest form.

1. $\frac{1}{8}$
   $+\frac{1}{3}$

2. $\frac{1}{4}$
   $+\frac{7}{10}$

3. $\frac{7}{12}$
   $+\frac{1}{6}$

4. $\frac{4}{5}$
   $+\frac{2}{3}$

5. $\frac{3}{16}$
   $+\frac{7}{8}$

6. $\frac{1}{6}$
   $+\frac{3}{10}$

7. $\frac{2}{15}$
   $+\frac{3}{5}$

8. $\frac{8}{9}$
   $+\frac{5}{6}$

9. $\frac{1}{2}$
   $+\frac{5}{8}$

10. $\frac{3}{4}$
    $+\frac{3}{7}$

11. $\frac{15}{16}$
    $+\frac{5}{12}$

12. $\frac{6}{7}$
    $+\frac{1}{6}$

13. $\frac{3}{5}$
    $+\frac{11}{12}$

14. $\frac{1}{10}$
    $+\frac{3}{8}$

15. $\frac{9}{11}$
    $+\frac{1}{3}$

16. $\frac{5}{9}$
    $+\frac{2}{5}$

17. $\frac{1}{2} + \frac{5}{11}$

18. $\frac{2}{5} + \frac{1}{10}$

19. $\frac{5}{16} + \frac{7}{12}$

20. $\frac{8}{9} + \frac{1}{18}$

21. $\frac{1}{6} + \frac{1}{12}$

22. $\frac{4}{7} + \frac{3}{4}$

23. $\frac{4}{9} + \frac{2}{3}$

24. $\frac{3}{8} + \frac{3}{4}$

Test Prep

25. On a trip to Boston, Michael's family traveled $\frac{1}{6}$ of the way by train and $\frac{5}{9}$ of the way by bus. They were driven the rest of the way by friends. In simplest form, how much of the trip did they make by train and bus combined?

    A $\frac{23}{27}$

    B $\frac{13}{18}$

    C $\frac{26}{36}$

    D $\frac{31}{54}$

26. Alina picked $\frac{2}{3}$ of a bushel of apples at the orchard, and her little sister picked $\frac{2}{5}$ of a bushel. How much did they pick altogether?

    _____

65   Use with text pages 260–261.

Name _____ Date _____

Multiply Fractions

Multiply. Write your answer in simplest form.

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

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

3. $\frac{1}{10} \times 2$

4. $\frac{3}{8} \times \frac{4}{9}$

_____ _____ _____ _____

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

6. $\frac{1}{2} \times \frac{6}{12}$

7. $\frac{16}{20} \times \frac{2}{4}$

8. $\frac{4}{7} \times \frac{4}{7}$

_____ _____ _____ _____

9. $6 \times \frac{5}{6}$

10. $\frac{12}{16} \times \frac{1}{8}$

11. $10 \times \frac{3}{5}$

12. $15 \times \frac{2}{3}$

_____ _____ _____ _____

13. $\frac{1}{2} \times \frac{1}{2}$

14. $\frac{1}{5} \times \frac{5}{7}$

15. $\frac{7}{8} \times \frac{8}{9}$

16. $4 \times \frac{3}{12}$

_____ _____ _____ _____

17. $\frac{3}{7} \times \frac{1}{3}$

18. $\frac{1}{10} \times 10$

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

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

_____ _____ _____ _____

21. $\frac{3}{8} \times \frac{9}{12}$

22. $\frac{2}{9} \times \frac{3}{5}$

23. $\frac{1}{4} \times 8$

24. $\frac{4}{5} \times \frac{3}{4}$

_____ _____ _____ _____

Test Prep

25. On Wednesday, Kelsey had read $\frac{3}{4}$ of a book. On Thursday, she read $\frac{2}{3}$ of the unread pages. What fraction of the book did she still have left to read? Explain how you found your answer.

_____

26. Emily, Brady, Ben, Erin, Ethan, and Jenny each ran an equal part of a two-mile relay race. What part of a mile did each person run?

A $\frac{1}{6}$ C $\frac{2}{3}$

B $\frac{1}{3}$ D $\frac{1}{2}$

                   Use with text pages 314–315.

Name _____ Date _____

Divide Mixed Numbers   Week 7

Rewrite each expression as a multiplication expression.

1. $12 \div 3\frac{1}{4}$ 2. $\frac{7}{8} \div 1\frac{2}{5}$ 3. $2\frac{2}{5} \div 3$ 4. $2\frac{1}{3} \div 1\frac{1}{4}$

_____ _____ _____ _____

Write each quotient in simplest form.

5. $3\frac{1}{3} \div 5$ ____ 6. $\frac{3}{4} \div 1\frac{4}{5}$ ____ 7. $\frac{5}{8} \div 2\frac{1}{4}$ ____ 8. $2\frac{2}{3} \div \frac{2}{3}$ ____

9. $4 \div 1\frac{1}{2}$ ____ 10. $5\frac{1}{4} \div \frac{3}{8}$ ____ 11. $6 \div 2\frac{1}{4}$ ____ 12. $3\frac{6}{7} \div 2\frac{1}{4}$ ____

13. $\frac{3}{4} \div 1\frac{1}{8}$ ____ 14. $4 \div 1\frac{3}{5}$ ____ 15. $5\frac{1}{3} \div 3\frac{1}{3}$ ____ 16. $5\frac{1}{4} \div 3$ ____

17. $6 \div 2\frac{2}{5}$ ____ 18. $4\frac{2}{3} \div 2$ ____ 19. $2\frac{1}{6} \div 1\frac{1}{3}$ ____ 20. $5\frac{1}{2} \div \frac{4}{5}$ ____

21. $\frac{3}{4} \div 2\frac{1}{2}$ ____ 22. $1\frac{2}{3} \div 3$ ____ 23. $\frac{1}{4} \div 2\frac{2}{3}$ ____ 24. $2\frac{2}{3} \div 4$ ____

25. $1\frac{3}{8} \div 4\frac{1}{4}$ ____ 26. $3\frac{3}{7} \div 1\frac{1}{3}$ ____ 27. $6 \div 1\frac{1}{8}$ ____ 28. $\frac{4}{7} \div 2\frac{2}{3}$ ____

Algebra • Expressions Rewrite each expression as a fraction in simplest form.

29. $3a \div 6$ ____ 30. $2 \div 8x$ ____ 31. $r \div s$ ____ 32. $5p \div 5q$ ____

33. $6m \div \frac{9}{n}$ ____ 34. $\frac{2}{x} \div \frac{4}{xy}$ ____ 35. $\frac{a}{b} \div \frac{2a}{b}$ ____ 36. $3x \div \frac{xy}{4}$ ____

Test Prep

37. Linda measured $8\frac{2}{3}$ yards of cloth. She then cut it into 4 equal pieces. What was the length of each piece of cloth?

_____

38. Rolf measured $8\frac{1}{4}$ yards of cloth. He then cut it into pieces each measuring $2\frac{3}{4}$ yards. Into how many pieces did he cut the cloth?

A 2   C 3
B 4   D 5

81   Use with text pages 324–327.

Divide a Decimal by a Decimal

Divide. Round to the nearest hundredth. Check that your answer is reasonable.

1. $0.6\overline{)2.4}$ _____
2. $0.5\overline{)0.25}$ _____
3. $1.2\overline{)0.48}$ _____
4. $0.06\overline{)14.3}$ _____

5. $0.4\overline{)17.6}$ _____
6. $0.04\overline{)17.6}$ _____
7. $0.4\overline{)1.76}$ _____
8. $0.04\overline{)0.176}$ _____

9. $0.9\overline{)0.82}$ _____
10. $6.5\overline{)9.1}$ _____
11. $0.25\overline{)0.06}$ _____
12. $0.4\overline{)0.008}$ _____

13. $1.2\overline{)40.8}$ _____
14. $0.03\overline{)6.3}$ _____
15. $0.7\overline{)14.8}$ _____
16. $2.4\overline{)1.8}$ _____

17. $0.05\overline{)72}$ _____
18. $4.5\overline{)245}$ _____
19. $21\overline{)780}$ _____
20. $0.4\overline{)8.34}$ _____

21. Stacy divided 12.8 by 0.04. She found the quotient to be 32. Was she correct? Explain your answer.

_____

_____

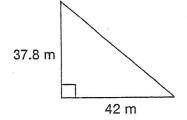22. Without actually dividing, tell which quotient is greater. Explain how you know.

$4.01\overline{)9.03}$ $38.3\overline{)9.03}$

_____

Test Prep

23. Andy spent $10.68 on pens. He paid $0.89 for each pen. How many pens did he buy?

_____

24. Find 12.4 ÷ 0.42 to the nearest hundredth.

A 290.52   C 29.52
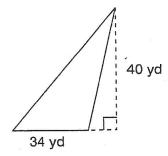
B 2.95   D 3

Use with text pages 368–369.

Algebra: Area of a Triangle

Find the area of each triangle.

1.

37.8 m

42 m

_____

2.

40 yd

34 yd

_____

3.

2 ft

$3\frac{1}{4}$ ft

_____

4.

2.5 cm

2.5 cm

_____

5.

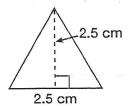$\frac{2}{3}$ in.
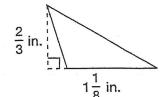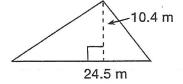
$1\frac{1}{8}$ in.
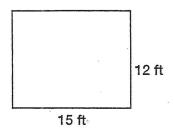
_____

6.

10.4 m

24.5 m

_____

Test Prep
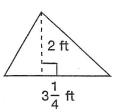
7. A triangle has a height of 4.2 meters and an area of 25.2 square meters. What is the base of the triangle?

  A 6 m   c 12 m

  B 8 m   D 14 m

8. A triangle has a base of 12 centimeters and an area of 48 square centimeters. What is the height of the triangle?
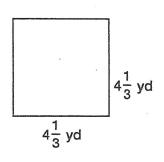
_____

Use with text pages 432–433.

Perimeter

Find the perimeter or the missing length.

1.

12 ft

15 ft

_____

2.

$4\frac{1}{3}$ yd

$4\frac{1}{3}$ yd

_____

3.

1.5 m

4.25 m

_____

4.

$P = 10$ m

_____

5.

62 ft = P

22 ft

_____
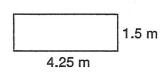
6.

$P = 7\frac{1}{2}$ in.

$1\frac{1}{4}$ in.

_____

Complete the chart below. Each figure in the chart is a rectangle with the given measurements.

Rectangle	Formula: $P = 2l + 2w$	Perimeter
7. $l = 5.3$ m, $w = 2.1$ m		
8. $l = 14$ ft, $w = 7$ ft		
9. $l = 15$ yd, $w = 4$ yd		

Test Prep

10. Find the length of a side of a square with a perimeter of 30 meters.

   A 6.5 m   **C** 7.5 m

   B 7 m   **D** 8 m

11. A rectangle has a width of 6 feet and a perimeter of 28 feet. What is its length?

_____

Use with text pages 422–423.