Name _____

Summer Packet
Entering 6th Grade

Subtracting Decimals

Subtract.

1. $\begin{array}{r} 92.1 \\ -\ 32.6 \\ \hline \end{array}$

2. $\begin{array}{r} 52.7 \\ -\ 36.9 \\ \hline \end{array}$

3. $\begin{array}{r} 85.76 \\ -\ 12.986 \\ \hline \end{array}$

4. $\begin{array}{r} 32.7 \\ -\ 2.328 \\ \hline \end{array}$

5. $8.7 - 0.9 =$ _____

6. $23.3 - 1.32 =$ _____

7. Kelly subtracted 2.3 from 20 and got 177.7. Explain why this answer is unreasonable.

_____

_____

At a local swim meet, the second-place swimmer of the 100-m freestyle had a time of 9.33 sec. The first-place swimmer's time was 1.32 sec faster than the second-place swimmer. The third-place time was 13.65 sec.

8. What was the time for the first-place swimmer? _____

9. What was the difference in time between the second- and third-place swimmers? _____

10. Miami's annual precipitation in 2000 was 61.05 in. Albany's was 46.92 in. How much greater was Miami's precipitation than Albany's?

A 107.97 in. **B** 54.31 in. **C** 14.93 in. **D** 14.13 in.

11. **Writing to Explain** Explain how to subtract 7.6 from 20.39.

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Name _____

Summer Packet
Entering 6th Grade

Multiplying Greater Numbers

Find each product. Estimate to check that your answer is reasonable.

1. 556 × 34

2. 238 × 75

3. 395 × 76

4. 483 × 57

5. 628 × 33

6. 155 × 35

7. 643 × 49

8. 576 × 94

9. In a class of 24 students, 13 students sold over 150 raffle tickets each, and the rest of the class sold about 60 raffle tickets each. The class goal was to sell 2,000 tickets. Did they reach their goal? Explain.

_____

_____

_____

10. Player A's longest home run distance is 489 ft. If Player A hits 45 home runs at his longest distance, what would the total distance be? _____

11. Player B's longest home run distance is 500 ft. There are 5,280 ft in 1 mi. How many home runs would Player B need to hit at his longest distance for the total to be greater than 1 mi? _____

12. Which equation shows how you can find the number of minutes in one year?

A 60 × 24 × 365
B 60 × 60 × 24
C 60 × 365
D 60 × 60 × 365

13. Write a real-world problem where you would have to multiply 120 and 50.

_____

Name _____

Summer Packet
Entering 6th Grade

Multiplying Two Decimals

Find each product.

1. 5.2×0.3

2. 4.5×0.2

3. 8.6×7.4

4. 1.9×0.05

5. $0.79 \times 4.3 =$ _____

6. $0.8 \times 0.05 =$ _____

7. The product of 4.7 and 6.5 equals 30.55. What is the product of 4.7 and 0.65? 4.7 and 65?

_____

8. What would be the gravity in relation to Earth of a planet with 3.4 times the gravity of Mercury?

_____

9. The gravity of Venus is 0.35 times that of Jupiter. What is the gravity of Venus in relation to Earth's gravity?

_____

Relative (to Earth) Surface Gravity

Planet	Gravity
Mercury	0.39
Neptune	1.22
Jupiter	2.6

10. How many decimal places are in the product of a number with decimal places to the hundredths multiplied by a number with decimal places to the tenths?

A 2 **B** 3 **C** 4 **D** 5

11. Explain how you know the number of decimal places that should be in the product when you multiply two decimal numbers together.

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Name _____

Summer Packet
Entering 6th Grade

Order of Operations

Use the order of operations to evaluate each expression.

1. $4 \times 4 + 3 =$ _____
2. $3 + 6 \times 2 \div 3 =$ _____
3. $24 - (8 \div 2) + 6 =$ _____
4. $(15 - 11) \times (25 \div 5) =$ _____
5. $26 - 4 \times 5 + 2 =$ _____
6. $15 \times (7 - 7) + (5 \times 2) =$ _____
7. $(8 \div 4) \times (7 \times 0) =$ _____
8. $5 \times (6 - 3) + 10 \div (8 - 3) =$ _____
9. Which is a true statement, $5 \times 4 + 1 = 25$ or $3 + 7 \times 2 = 17$? Explain your answer.

_____

_____

Insert parentheses to make each statement true.

10. $25 \div 5 - 4 = 25$ _____
11. $7 \times 4 - 4 \div 2 = 26$ _____
12. $3 + 5 \times 2 - 10 = 6$ _____
13. Insert parentheses in the expression $6 + 10 \times 2$ so that:

    a. the expression equals 32. _____

    b. the expression equals $(12 + 1) \times 2$. _____

14. Solve $(25 - 7) \times 2 \div 4 + 2$.

    A 18 **B** 11 **C** 6 **D** 5

15. Write the steps of the order-of-operations.

_____

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Name _____

Summer Packet
Entering 6th Grade

Zeros in the Quotient

Find each quotient. Check your answers by multiplying.

1. $490 \div 7 =$ _____

2. $326 \div 3 =$ _____

3. $916 \div 3 =$ _____

4. $720 \div 2 =$ _____

5. $2\overline{)941}$

6. $9\overline{)982}$

7. $7\overline{)740}$

8. $5\overline{)703}$

9. If there are 505 seats in an auditorium divided equally into 5 sections, how many seats are in each section?

_____

10. A book company publishes 749 copies of a novel and distributes them to 7 bookstores. If each bookstore were to receive the same number of copies, how many copies would be sent to each store?

_____

11. In one year, Dolores and Tom's four children saved $420 by recycling cans. When they divided the money equally, how much money did each child receive?

A $50 **B** $100 **C** $105 **D** $1,500

12. Writing To Explain Explain why estimating before you divide $624 \div 6$ helps you place the first digit in the quotient.

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Name _____

Summer Packet
Entering 6th Grade

2-Digit Quotients

In **1** through **6,** find each quotient.

1. $14\overline{)413}$ _____

2. $29\overline{)634}$ _____

3. $35\overline{)768}$ _____

4. $19\overline{)401}$ _____

5. $45\overline{)942}$ _____

6. $26\overline{)503}$ _____

7. The school student council sponsored a Switch Day where students were able to switch classes every 20 minutes. The students are in school for 7 hours. If a student switched as often as possible, how many classrooms in all did that student visit? (Hint: There are 60 minutes in 1 hour.)

_____

8. 456 students participated in Switch Day. The students raised money for charity so that the principal would approve of the day. If the total amount of money raised was $912, and each student brought in the same amount of money, how much did each student raise?

_____

9. The total dinner bill at a buffet came out to $589 for 31 people. **About** how much was the buffet cost per person?

A $15.00 **B** $20.00 **C** $22.00 **D** $25.00

10. If you have a two-digit divisor and a three-digit dividend, does the quotient always have the same number of digits?

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Name _____

Summer Packet
Entering 6th Grade

Dividing a Decimal by a Decimal

Find each quotient.

1. $8.4 \div 0.03 =$ _____
2. $66.15 \div 0.063 =$ _____
3. $100.5 \div 1.5 =$ _____
4. $860 \div 0.04 =$ _____
5. $72.8 \div 10.4 =$ _____
6. $14.36 \div 0.04 =$ _____
7. $2.87 \div 0.1 =$ _____
8. $78.2 \div 0.2 =$ _____

9. How does multiplying both the dividend and the divisor by a factor of 10 sometimes make a problem easier to solve?

_____

_____

For each item, find how many times greater the 2011 cost is than the 1955 cost. Round your answer to the nearest hundredth.

Item	1955 Cost	2011 Cost
Movie admission	$0.75	$9.50
Regular popcorn	$0.25	$4.25
Regular drink	$0.35	$2.75

10. movie admission _____
11. regular popcorn _____
12. regular drink _____

13. Which item has increased the greatest amount of times from its original cost? _____

14. Divide. Round to the nearest hundredth. $250.6 \div 1.6$

A 156 B 156.6 C 156.61 D 156.63

15. Allison and Rhea got different quotients when they divided 4.80 by 0.12. Whose work is correct? Explain why.

Allison

$$12\overline{)4.80} \quad 0.40$$

Rhea

$$12\overline{)480} \quad 40.0$$

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Name _____

Summer Packet
Entering 6th Grade

Adding Fractions with Unlike Denominators

Find each sum. Simplify if necessary.

1. $\frac{2}{9}+\frac{1}{3}$ _____
2. $\frac{1}{7}+\frac{3}{21}$ _____
3. $\frac{2}{3}+\frac{1}{5}$ _____
4. $\frac{1}{4}+\frac{2}{3}$ _____
5. $\frac{1}{12}+\frac{4}{6}$ _____
6. $\frac{1}{2}+\frac{2}{5}$ _____
7. $\frac{1}{6}+\frac{5}{12}$ _____
8. $\frac{4}{6}+\frac{1}{3}$ _____
9. $\frac{1}{5}+\frac{1}{8}$ _____
10. $\frac{3}{4}+\frac{1}{9}$ _____
11. $\frac{6}{12}+\frac{1}{3}$ _____
12. $\frac{4}{8}+\frac{1}{2}$ _____

Jeremy collected nickels for one week. He is making stacks of his nickels to determine how many he has. The thickness of one nickel is $\frac{1}{16}$ inch.

13. How tall is a stack of 16 nickels?

_____

14. What is the combined height of 3 nickels, 2 nickels, and 1 nickel?

_____

15. What is the sum of $\frac{5}{30}+\frac{4}{6}$?

A $\frac{5}{6}$ B $\frac{7}{9}$ C $\frac{2}{3}$ D $\frac{9}{12}$

16. How do you rename $\frac{2}{5}$ so you can add it to $\frac{11}{25}$? What is the sum?

_____

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_____

Name _____

Summer Packet
Entering 6th Grade

Subtracting Mixed Numbers

For **1** through **10,** find each difference. Simplify, if possible.

1. $10\frac{3}{4} - 7\frac{1}{4}$

2. $7\frac{3}{7} - 2\frac{8}{21}$

3. $3 - 2\frac{2}{3}$

4. $17\frac{7}{8} - 12\frac{3}{12}$

5. $9\frac{5}{9} - 6\frac{5}{6}$ _____

6. $4\frac{3}{4} - 2\frac{2}{3}$ _____

7. $6\frac{1}{4} - 3\frac{1}{3}$ _____

8. $5\frac{1}{5} - 3\frac{7}{8}$ _____

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

10. $2\frac{9}{10} - 2\frac{1}{3}$ _____

The table shows the length and width of several kinds of bird eggs.

Egg Sizes in Inches (in.)

Bird	Length	Width
Canada goose	$3\frac{2}{5}$	$2\frac{3}{10}$
Robin	$\frac{3}{4}$	$\frac{3}{5}$
Turtledove	$1\frac{1}{5}$	$\frac{9}{10}$
Raven	$1\frac{9}{10}$	$1\frac{3}{10}$

11. How much longer is the Canada goose egg than the raven egg?

_____

12. How much wider is the turtledove egg than the robin egg?

_____

13. Which is the difference of $21\frac{15}{16} - 18\frac{3}{4}$?

A $2\frac{7}{16}$ **B** $2\frac{9}{16}$ **C** $3\frac{3}{16}$ **D** $3\frac{9}{16}$

14. Explain why it is necessary to rename $4\frac{1}{4}$ if you subtract $\frac{3}{4}$ from it.

_____

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Name _____

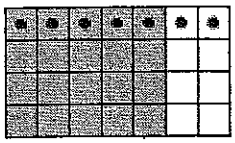
Summer Packet
Entering 6th Grade

Multiplying Two Fractions

Write the multiplication problem that each model represents then solve. Put your answer in simplest form.

1. 

_____

2. 

_____

Find each product. Simplify if possible.

3. $\frac{7}{8} \times \frac{4}{5} =$ _____

4. $\frac{3}{7} \times \frac{2}{3} =$ _____

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

6. $\frac{2}{7} \times \frac{1}{4} =$ _____

7. $\frac{2}{9} \times \frac{1}{2} =$ _____

8. $\frac{3}{4} \times \frac{1}{3} =$ _____

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

10. $\frac{1}{5} \times \frac{5}{6} =$ _____

11. $\frac{2}{3} \times \frac{5}{6} \times 14 =$ _____

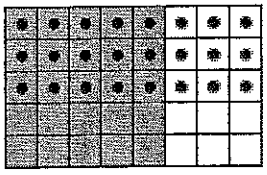
12. $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} =$ _____

13. If $\frac{4}{5} \times \blacksquare = \frac{2}{5}$, what is $\blacksquare$? _____

14. In Mrs. Marshall's classroom, $\frac{6}{7}$ of the students play sports. Of the students who play sports, $\frac{4}{5}$ also play an instrument. If there are 35 students in her class, how many play sports and an instrument?

_____

15. Which does the model represent?



A $\frac{3}{8} \times \frac{3}{5}$

B $\frac{7}{8} \times \frac{2}{5}$

C $\frac{3}{5} \times \frac{5}{8}$

D $\frac{4}{8} \times \frac{3}{5}$

16. Describe a model that represents $\frac{3}{3} \times \frac{4}{4}$.

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Name _____

Summer Packet
Entering 6th Grade

Dividing Whole Numbers by Unit Fractions

In **1** and **2**, use the picture to find each quotient.

1. How many thirds are in 1?

_____

2. How many thirds are in 7?

_____

In **3** and **4**, draw a picture to find each quotient.

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

_____

4. $4 \div \frac{1}{8}$

_____

In **5** and **6**, use multiplication to find each quotient.

5. $6 \div \frac{1}{3}$

_____

6. $5 \div \frac{1}{10}$

_____

7. Julie bought 3 yards of cloth to make holiday napkin rings. If she needs $\frac{3}{4}$ of a yard to make each ring, how many rings can she make?

_____

8. When you divide a whole number by a fraction with a numerator of 1, explain how you can find the quotient.

_____

_____

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Name _____

Summer Packet Entering 6th Grade

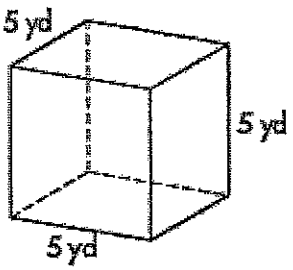
Volume

Find the volume of each rectangular prism.

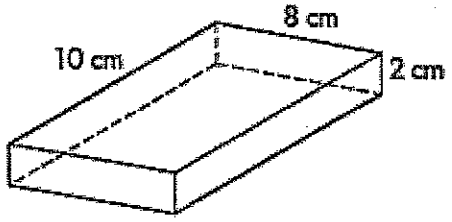
1. base area 56 in^2, height 6 in. _____

2. base area 32 cm^2, height 12 cm _____

3. base area 42 m^2, height 8 m _____

4. 

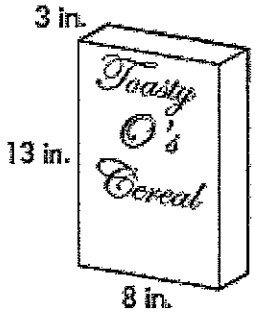
_____

5. 

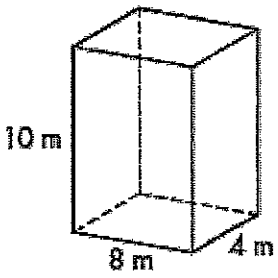
_____

6. What is the volume of the cereal box?

_____



7. What is the volume of this solid?



_____

8. What is the height of a solid with a volume of 120 m^3 and base area of 30 m^2?

_____

9. Bradford has an aquarium with a base that is 22 inches × 12 inches and a height that is 15 inches. What is the volume of the aquarium? Would the volume of the aquarium change if it did not have a lid? Explain.

_____

_____

_____