

Directions: Please choose the best answer choice for each of the following questions.

1. Simplify the expression. Show your work.

$$\frac{2}{5} \div \frac{3}{4}$$

Use words, numbers, and/or pictures to show your work. Write your answer(s) on the paper provided.

2. Terrence York found that 5,699 people in his state have the last name of York. If all the Yorks in his state lined up in rows of 100, how many full rows would there be?

- A. 5
- B. 6
- C. 56
- D. 69

3. Ms. Farnsworth is making vests for the school's pep squad. She has a piece of fabric that is 1,238 centimeters long. Each vest needs 64 centimeters of fabric. How many vests can she make?

- A. 17 vests
- B. 18 vests
- C. 19 vests
- D. 20 vests

4. The chart below shows the items that four people bought at a grocery store and the total cost of the items.

Person	Food Items	Total Cost
Max	Apple, soup, chicken	\$7.00
Hannah	Apple, bread, chicken	\$7.00
Nikki	Soup, soup, chicken	\$8.00
David	Chicken, chicken, chicken	\$12.00

- Which two items are the same price?
- What does each item cost?

Use words, numbers, and/or pictures to show your work. Write your answer(s) on the paper provided.

5. Rudy's Quick Stop was selling gasoline for \$1.709 per gallon. The Super 6 Gas Depot was selling gasoline for \$1.695 per gallon. What was the difference in price per gallon between the two stations?

- A. \$0.014
- B. \$0.104
- C. \$0.114
- D. \$0.194

6. What is the greatest common factor of 39 and 91?

- A. 1
- B. 13
- C. 17
- D. 39

7. Harold's grandmother, Betty, calls him every sixth day. His Aunt Sue calls him every tenth day. If Betty and Sue both called today, how many days will pass before they call again on the same day?

- A. 12 days
- B. 20 days
- C. 30 days
- D. 60 days

8. Erika drove 1407 miles to visit her brother. She drove for a total of 25 hours. If she drove the same distance each hour, how many miles did Erika drive each hour?

- A. 56.28
- B. 56.7
- C. 57.28
- D. 57.7

9. What is $330,010 \div 11$?

- A. 300 R10
- B. 3,000 R10
- C. 30,000 R10
- D. 300,000 R10

10. A shoe manufacturer needs to deliver 1,440 pairs of shoes to a shoe store. The shoes are shipped in big boxes. Each box holds 25 pairs of shoes. How many boxes will the manufacturer need for shipping 1,440 pairs of shoes?

- A. at least 56 boxes
- B. at least 57 boxes
- C. at least 58 boxes
- D. at least 60 boxes

11. Joanna has $\frac{3}{4}$ of her book left to read. If she reads $\frac{1}{4}$ of her book each day, how many days will it take her to finish the book?

- A. $\frac{3}{16}$
- B. $\frac{1}{2}$
- C. 1
- D. 3

12. Jackson practiced piano for 18 minutes. This is 4 minutes more than half the time he spent practicing the trumpet. How many minutes did Jackson spend practicing the trumpet?

- A. 13
- B. 28
- C. 32
- D. 44

13. Scott's mom wanted to give him an allowance for doing extra chores, and decided to let him choose the amount he would receive. She gave Scott four options to choose from: \$0.50 per day, \$3.00 per week, \$10.00 per month, or \$200.00 per year. Which option should Scott choose in order to earn the largest amount of money?

- A. \$0.50 per day
- B. \$3.00 per week
- C. \$10.00 per month
- D. \$200.00 per year

14. A local store is having a DVD sale. Each DVD costs \$8.99. The library has \$65.00 to spend on DVDs. About how many DVDs can the library buy?

- A. 6
- B. 7
- C. 8
- D. 9

Stop! You have finished this exam.

**Add and Subtract Decimals**

Find the sum or difference. Estimate to check.

1.
$$\begin{array}{r} 2.7 \\ + 1.1 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 7.568 \\ + 3.405 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 42.35 \\ 6.81 \\ + 9.47 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 11.79 \\ + 15.02 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 13.75 \\ 4.31 \\ + 2.10 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 7.5 \\ + 2.3 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 6.38 \\ 8.12 \\ + 13.52 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 4.054 \\ + 7.285 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 22.35 \\ + 11.86 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 3.817 \\ 6.194 \\ + 5.417 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 8.59 \\ - 2.34 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 9.8 \\ - 2.3 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 6.27 \\ - 0.83 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 12.362 \\ - 8.18 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 10.98 \\ - 1.29 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 3.1 \\ - 1.7 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 6.14 \\ - 4.81 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 15.09 \\ - 8.73 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 39.47 \\ - 22.29 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 68.17 \\ - 32.51 \\ \hline \end{array}$$

21. $22.12 - 6.78$

22. $21.599 - 17.369$

23. $8.376 - 2.109$

24. $10.05 + 2.78$

25. $678 + 3.410$

26. $8.9 + 7.25 + 5.42$

Mixed Review

27. Round 24.579 to the nearest hundredth.

28. $45,681 + 98,810$

29. Order 12.1, 12.34, 12.43, and 12.5 from greatest to least.

30. Which is greater, twenty-seven thousandths or fourteen hundredths?

31.
$$\begin{array}{r} 739 \\ 621 \\ + 667 \\ \hline \end{array}$$

32.
$$\begin{array}{r} 7,232 \\ 946 \\ + 31 \\ \hline \end{array}$$

33.
$$\begin{array}{r} 2,780 \\ 9,621 \\ + 3,221 \\ \hline \end{array}$$

34.
$$\begin{array}{r} 8,869 \\ 4,500 \\ + 399 \\ \hline \end{array}$$

Zeros in Subtraction

Find the difference.

1.
$$\begin{array}{r} 2.5 \\ - 0.8 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3.4 \\ - 3.1 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 2.04 \\ - 1.7 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 3.6 \\ - 2.7 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 3.5 \\ - 1.04 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 1.6 \\ - 0.8 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 4.8 \\ - 4.2 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 3.07 \\ - 2.8 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4.2 \\ - 3.8 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 6.7 \\ - 2.02 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 3.87 \\ - 1.362 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 2.7 \\ - 1.824 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 5.426 \\ - 2.56 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 12.507 \\ - 4.315 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 10.069 \\ - 2.253 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 4.68 \\ - 2.157 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 3.2 \\ - 2.451 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 7.264 \\ - 3.49 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 16.852 \\ - 8.23 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 17.57 \\ - 13.154 \\ \hline \end{array}$$

21. $2.06 - 1.17 = \underline{\hspace{2cm}}$

22. $1.7 - 0.763 = \underline{\hspace{2cm}}$

23. $2.85 - 1.9 = \underline{\hspace{2cm}}$

24. $3.7 - 2.68 = \underline{\hspace{2cm}}$

25. $2.4 - 1.468 = \underline{\hspace{2cm}}$

26. $3.1 - 2.51 = \underline{\hspace{2cm}}$

27. $3.68 - 1.892 = \underline{\hspace{2cm}}$

28. $5.2 - 3.181 = \underline{\hspace{2cm}}$

29. $6.42 - 3.374 = \underline{\hspace{2cm}}$

30. $4.21 - 2.362 = \underline{\hspace{2cm}}$

31. $7.3 - 4.226 = \underline{\hspace{2cm}}$

32. $5.69 - 2.473 = \underline{\hspace{2cm}}$

Mixed Review

For 33–35, use the table.

33. The maximum speeds of animals over one-quarter mile varies greatly. What is the difference between the fastest and the slowest animal?

34. How much faster is a greyhound than a human?

SPEEDS OF ANIMALS	
Animal	Speed
Quarter horse	47.5 mph
Greyhound	39.35 mph
Human	27.89 mph
Snail	0.03 mph

35. In the snail's speed, what is the place value of the 3?



Problem Solving Skill

Estimate or Find Exact Answer

Decide whether you need an exact answer or an estimate. Then solve.

1. Ben received \$10.00 for doing chores. He wants to buy some cards for \$2.89, an action figure for \$4.99, and a comic book for \$1.79. Does he have enough to pay for all three items?

2. Yasmin received \$50.00 for her birthday. She wants to buy a sweater for \$13.99, a necklace for \$14.95, and shoes for \$19.98. How much change will she receive?

Kathy wants to buy some roses for \$6.99, some potting soil for \$3.98, and a ceramic pot for \$7.95. She has \$20.00.

3. Which question about Kathy's shopping can be answered with an estimate?
A Does she have enough money for all 3 things?
B How much will she pay in all?
C How much change will she get?
D Which item costs the least?
4. Which question represents Kathy's change?
F $\$18.92 - \$14.94 = \$3.98$
G $\$6.99 + \$3.98 + \$7.95 = \18.92
H $\$20 - \$18.92 = \$1.08$
J $\$20 - \$1.08 = \$18.92$

Mixed Review

Solve.

5. Walt bought a CD player on sale for \$99.95 plus \$4.99 tax. The regular price was \$149.99 including tax. How much did Walt save?

6. Emma spent \$4 on cards and \$18 on a sweater. Emma has \$9 left. How much did Emma begin with?

7. In an even 2-digit number, the second digit is 3 times the first. What is the number?

8. Don is a cashier. When he calculates the amount of change, does he want an estimate or the exact answer?

Decimal Division

Make a model and find the quotient.

1. $0.016 \div 4 =$ _____ 2. $\$0.72 \div 8 =$ _____ 3. $0.42 \div 6 =$ _____

4. $4.8 \div 8 =$ _____ 5. $2.24 \div 4 =$ _____ 6. $4.98 \div 6 =$ _____

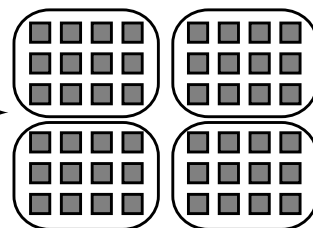
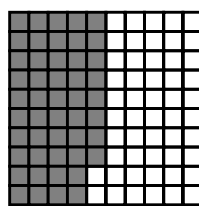
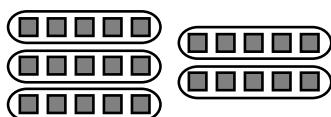
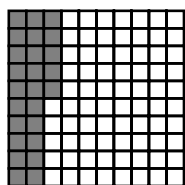
7. $47.6 \div 7 =$ _____ 8. $\$0.18 \div 3 =$ _____ 9. $\$1.32 \div 4 =$ _____

10. $22.4 \div 7 =$ _____ 11. $0.63 \div 3 =$ _____ 12. $3.5 \div 7 =$ _____

Use the model to complete the number sentence.

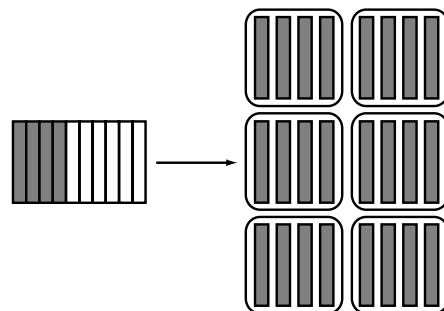
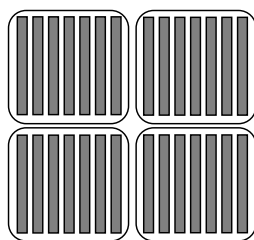
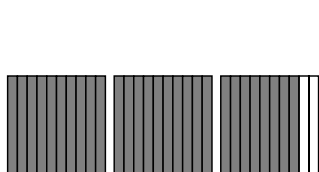
13. $0.25 \div 5 =$ _____

14. $0.48 \div 4 =$ _____



15. $2.8 \div 4 =$ _____

16. $2.4 \div 6 =$ _____



Mixed Review

17.
$$\begin{array}{r} 4.35 \\ \times 7.82 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 600 \\ \times 90 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 58 \\ \times 29 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 368 \\ \times 49 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 6.84 \\ \times 0.32 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 487 \\ \times 61 \\ \hline \end{array}$$

23. $50 \overline{)6,875}$

24.
$$\begin{array}{r} 86.84 \\ \times 3.24 \\ \hline \end{array}$$



Divide Decimals by Whole Numbers

Copy the quotient and place the decimal point.

$$1. \begin{array}{r} 07 \\ 8 \overline{)5.6} \end{array} \quad 8 \overline{)5.6} \quad 2. \begin{array}{r} 107 \\ 3 \overline{)3.21} \end{array} \quad 3 \overline{)3.21} \quad 3. \begin{array}{r} 096 \\ 3 \overline{)2.88} \end{array} \quad 3 \overline{)2.88} \quad 4. \begin{array}{r} 54 \\ 12 \overline{)64.8} \end{array} \quad 12 \overline{)64.8}$$

$$5. \begin{array}{r} 215 \\ 9 \overline{)19.35} \end{array} \quad 9 \overline{)19.35} \quad 6. \begin{array}{r} 356 \\ 7 \overline{)249.2} \end{array} \quad 7 \overline{)249.2} \quad 7. \begin{array}{r} 2004 \\ 4 \overline{)80.16} \end{array} \quad 4 \overline{)80.16} \quad 8. \begin{array}{r} 1467 \\ 5 \overline{)73.35} \end{array} \quad 5 \overline{)73.35}$$

Find the quotient. Check by multiplying.

9. $7 \overline{)47.6}$

10. $2 \overline{)6.06}$

11. $3 \overline{)2.22}$

12. $14 \overline{)\$674.24}$

13. $12 \overline{)61.08}$

14. $13 \overline{)325.52}$

15. $22.4 \div 7$

16. $237.5 \div 19$

17. $0.63 \div 3$

Mixed Review

18. $4,800 \div 3$

19.
$$\begin{array}{r} 748.57 \\ + 16.38 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 13.406 \\ - 1.839 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 76.49 \\ \times 5 \\ \hline \end{array}$$

**Divide by 2-Digit Divisors**

Name the position of the first digit of the quotient.

1. $17 \overline{)1,527}$

2. $23 \overline{)1,941}$

3. $34 \overline{)7,109}$

4. $45 \overline{)5,683}$

5. $89 \overline{)9,266}$

6. $31 \overline{)6,683}$

7. $24 \overline{)1,742}$

8. $87 \overline{)9,556}$

Divide. Check by multiplying.

9. $433 \div 35$

10. $698 \div 22$

11. $582 \div 41$

12. $3,121 \div 81$

13. $7,506 \div 64$

14. $8,921 \div 59$

15. $21,472 \div 75$

16. $14,117 \div 17$

Divide.

17. $72 \overline{)8,136}$

18. $39 \overline{)4,579}$

19. $27 \overline{)2,835}$

20. $49 \overline{)7,116}$

21. $13 \overline{)3,926}$

22. $81 \overline{)9,446}$

23. $35 \overline{)7,105}$

24. $6 \overline{)3,109}$

Match each check with a division problem.

25. $(43 \times 21) + 10 = 913$

a. $10,738 \div 76 = 141 \text{ r}22$

26. $(76 \times 141) + 22 = 10,738$

b. $6,348 \div 51 = 124 \text{ r}24$

27. $(28 \times 152) + 4 = 4,260$

c. $913 \div 43 = 21 \text{ r}10$

28. $(51 \times 124) + 24 = 6,348$

d. $4,260 \div 28 = 152 \text{ r}4$

Mixed Review

29.
$$\begin{array}{r} 35,482 \\ +28,453 \\ \hline \end{array}$$

30.
$$\begin{array}{r} 6.75 \\ \times 0.75 \\ \hline \end{array}$$

31.
$$\begin{array}{r} 92.99 \\ + 36.87 \\ \hline \end{array}$$

32.
$$\begin{array}{r} 123 \\ \times 98 \\ \hline \end{array}$$

33.
$$\begin{array}{r} 42,000 \\ + 1,212 \\ \hline \end{array}$$

1. Write down the first **five** multiples of 3.

.....
(1)

2. From the list of numbers

7 9 12 21 23 30 36 45

- (a) write down the multiples of 7.

.....
(2)

- (b) write down the multiples of 5.

.....
(2)

- (c) write down the multiples of 12.

.....
(2)

3. (a) Write down two multiples of 4.

..... and
(1)

- (b) Write down two multiples of 9.

..... and
(1)

- (c) Write down a number which is a multiple of both 4 and 9.

.....
(1)

4. Write down all the factors of 16.

.....
(2)

5. Write down all the factors of 26.

.....
(2)

6. From the list of numbers

3 5 7 9 11 15 24

(a) Write down a factor of 12

.....
(1)

(b) Write down a factor of 28

.....
(1)

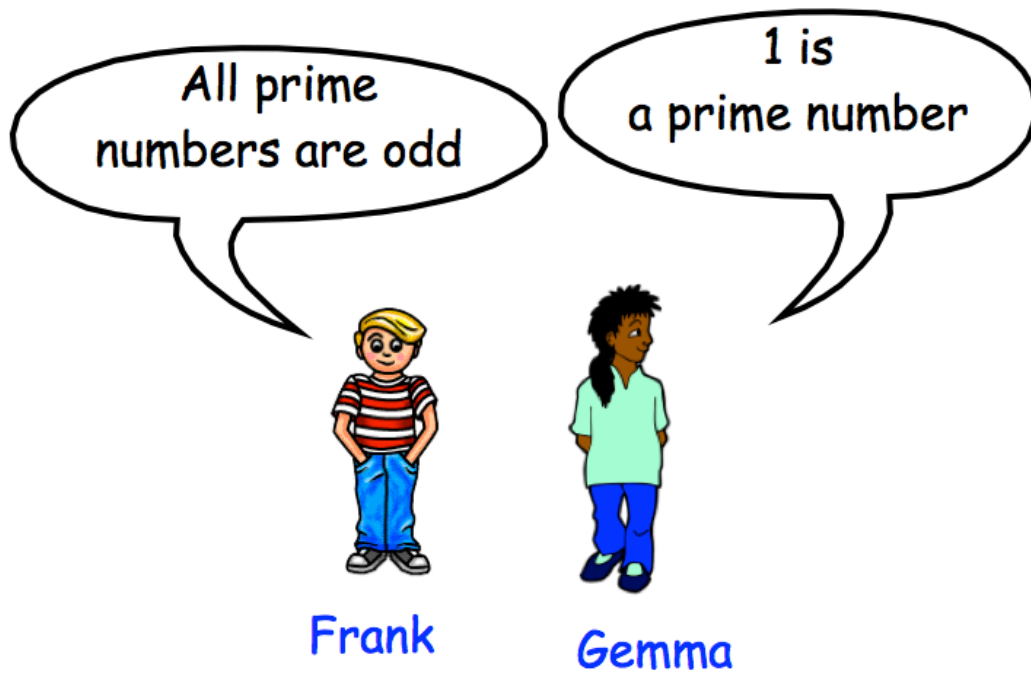
(c) Write down a factor of 81

.....
(1)

7. Write down all the prime numbers between 10 and 20.

.....
(2)

8.



Give a reason why each child is wrong.

Frank:
.....

Gemma:
.....

(2)

9. Here is a list of numbers

6 10 11 16 24 30 40

(a) Write down a multiple of 20

.....
(1)

(b) Write down a factor of 12

.....
(1)

(c) Write down a prime number

.....
(1)

10. Here is a list of 8 numbers.

15 16 17 18 20 22 24 29

(a) Write down a prime number

.....
(1)

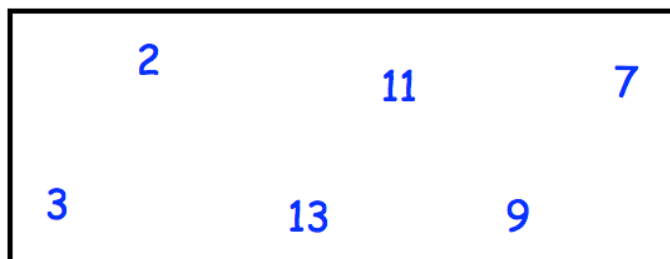
(b) Write down a factor of 30

.....
(1)

(c) Write down a multiple of 3, which is even.

.....
(1)

11.



From the numbers in the rectangle,

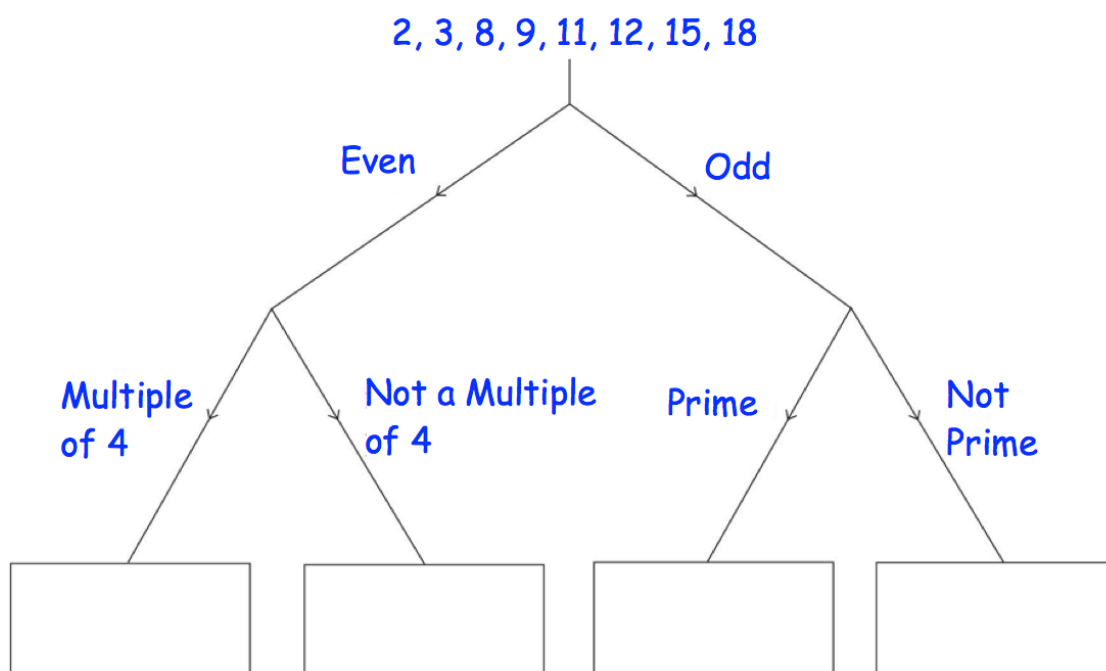
(a) Write down a factor of 35.

.....
(1)

(b) Write down the number which is **not prime**

.....
(1)

12. Sort **all** the numbers into the correct boxes.



(3)

13. A bus to Belfast leaves Antrim Bus Station every 25 minutes.
The first bus each day leaves at 7am.
Darren wants to get a bus after 8am.

What time is the first suitable bus?

.....
(2)

14. A blue light flashes every 8 seconds.
A red light flashes every 12 seconds.

Both lights have just flashed together.

After how many seconds will both lights flash together?

.....
(2)

15. Kelly is organising a barbecue.
She needs bread rolls and burgers.

Bread rolls are sold in packs of 20.
Burgers are sold in packs of 12.

Kelly buys exactly the same number of bread rolls as burgers.

What is the least number of each pack that Kelly buys?

..... packs of bread rolls

..... packs of burgers

(3)

16.

All even numbers
greater than two, can be written
as the sum of two prime numbers



Peter

Give **three** examples that show that Peter is correct.

..... + =

..... + =

..... + =

(3)

The Greatest Common Factor (GCF)

Let's say we have TWO whole numbers. We can then list all the *factors* of each number, and then find the factors that are common in both lists. Lastly, we can choose the greatest or largest among those "common factors." That is the **greatest common factor** of the two numbers. The term itself really tells you what it means!

Example 1. Find the greatest common factor of 18 and 30.

The factors of 18: 1, 2, 3, 6, 9, and 18.

The factors of 30: 1, 2, 3, 5, 6, 10, 15, and 30.

Their *common* factors are 1, 2, 3, and 6. The **greatest common factor** is 6.

Here is a **method** that can help you **to list all the factors of a given number**.

Example 2. Find the divisors (factors) of 36.

We check if 36 is divisible by 1, 2, 3, 4, 5, and so on. Each time we find a divisor, we write down two factors.

- 36 is divisible by 1. We write $36 = 1 \cdot 36$, and that equation gives us two factors of 36: both the smallest (1) and the largest (36).
- Next, 36 is also divisible by 2. We write $36 = 2 \cdot 18$, and that equation gives us two more factors of 36: the second smallest (2) and the second largest (18).
- Next, 36 is divisible by 3. We write $36 = 3 \cdot 12$, and now we have found the third smallest factor (3) and the third largest factor (12).
- Next, 36 is divisible by 4. We write $36 = 4 \cdot 9$, and we have found the fourth smallest factor (4) and the fourth largest factor (9).
- Finally, 36 is divisible by 6. We write $36 = 6 \cdot 6$, and we have found the fifth smallest factor (6) which is also the fifth largest factor.

We know that we are done because the list of factors from the "small" end (1, 2, 3, 4, 6) has **MET** the list of factors from the "large" end (36, 18, 12, 9, 6).

Therefore, all of the factors of 36 are: 1, 2, 3, 4, 6, 9, 12, 18, and 36.

1. List all of the factors of the given numbers.

a. 48	b. 60
c. 42	d. 99

2. Find the greatest common factor of the given numbers. Your work above will help!

a. 48 and 60	b. 42 and 48	c. 42 and 60	d. 99 and 60
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3. List all of the factors of the given numbers.

a. 44	b. 66
c. 28	d. 56
e. 100	f. 45

4. Find the greatest common factor of the given numbers. Your work above will help!

a. 44 and 66	b. 100 and 28	c. 45 and 100	d. 45 and 66
e. 28 and 44	f. 56 and 28	g. 56 and 100	h. 45 and 28

Example 3. What is the greatest common factor useful for?

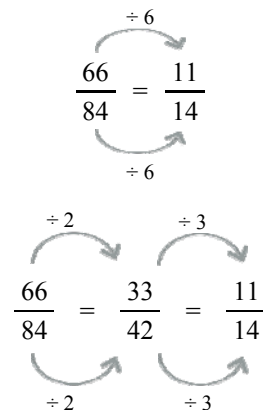
It can be used to simplify fractions. For example, let's say you know that the GCF of 66 and 84 is 6. Then, to simplify the fraction $\frac{66}{84}$ to the lowest terms, you divide both the numerator and the denominator by 6. →

However, it is *not* necessary to use the GCF when simplifying fractions. You can always simplify in several steps. See the example at the right. →

Or, you can *simplify by factoring*, like we did in the previous lesson:

$$\frac{66}{84} = \frac{6 \cdot 11}{7 \cdot 6 \cdot 2} = \frac{11}{14}$$

In fact, these other methods might be quicker than using the GCF.



5. Simplify these fractions, if possible. Your work in the previous exercises can help!

a. $\frac{48}{66}$

b. $\frac{42}{44}$

c. $\frac{42}{48}$

d. $\frac{99}{60}$

e. $\frac{48}{100}$

f. $\frac{100}{99}$

g. $\frac{56}{28}$

h. $\frac{44}{99}$

Using prime factorization to find the greatest common factor (optional)

Another, more efficient way to find the GCF of two or more numbers is to use the prime factorizations of the numbers to find *all* of the common prime factors. The product of those common prime factors forms the GCF.

Example 4. Find the GCF of 48 and 84.

The prime factorizations are: $48 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3$ and $84 = 2 \cdot 2 \cdot 3 \cdot 7$.

We see that the common prime factors are 2 and 2 and 3. Therefore, the GCF is $2 \cdot 2 \cdot 3 = 12$.

Example 5. Find the GCF of 75, 105, and 125.

The prime factorizations are: $75 = 3 \cdot 5 \cdot 5$, $105 = 3 \cdot 5 \cdot 7$, and $150 = 2 \cdot 3 \cdot 5 \cdot 5$.

The common prime factors for all of them are 3 and 5. Therefore, the GCF of these three numbers is $3 \cdot 5 = 15$.

6. Find the greatest common factor of the numbers.

a. 120 and 66	b. 36 and 136
c. 98 and 76	d. 132 and 72
e. 45 and 76	f. 64 and 120

7. Find the greatest common factor of the given numbers.

a. 75, 25 and 90	b. 54, 36, and 40
c. 18, 24, and 36	d. 72, 60, and 48

Find the greatest common factor of 187 and 264.

Puzzle Corner

Greatest Common Factor (GCF) and Least Common Multiple (LCM) word problems

Grade 5 Math Word Problems Worksheet

Read and answer each question.

1. At the gym, Hillary swims every 6 days, runs every 4 days and cycles every 16 days. If she did all three activities today, in how many days will she do all three activities again on the same day?
2. Oscar needs to ship 14 rock CDs, 12 classical CDs, and 8 pop CDs. He can pack only one type of CD in each box and he must pack the same number of CDs in each box. What is the greatest number of CDs Oscar can pack in each box?
3. I want to plant 45 sunflower plants, 81 corn plants and 63 tomato plants in my garden. If I put the same number of plants in each row and each row has only one type of plant, what is the greatest number of plants I can put in one row?
4. Cups are sold 6 to a package and plates are sold 8 to a package. If you want to have the same number of each item for a party, what is the least number of packages of each you need to buy?
5. A full moon occurs every 30 days. If the last full moon occurred on a Friday, how many days will pass before a full moon occurs again on a Friday?



Multiply Decimals and Whole Numbers

Make a model to find each product.

1. 2×0.5

2. 3×0.4

3. 2×0.25

4. 0.17×3

5. 4×0.7

6. 0.11×4

7. 3×0.8

8. 0.33×2

Phillip is buying school supplies at the student book store.

For 9–13, use the pictures to find the total cost.

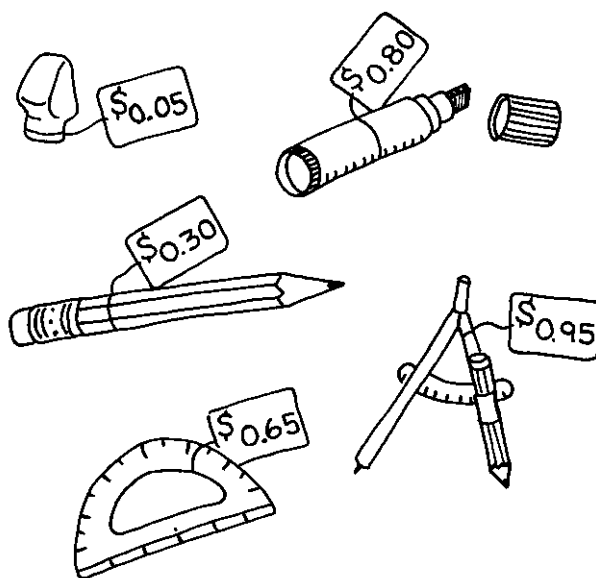
9. 2 pencils, 2 erasers

10. 2 markers, 1 protractor

11. 3 pencils, 2 compasses

12. 4 markers, 2 erasers, 1 protractor

13. 3 compasses, 2 markers, 1 pencil



Mixed Review

14. Phyllis is shopping at the student bookstore. Which cost more—2 markers, or 1 compass and 2 pencils?

$$\begin{array}{r} 335,657 \\ \times \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7,612 \\ \times \quad 15 \\ \hline \end{array}$$

15. Sam has \$0.36. He has 5 coins. What are they?

$$\begin{array}{r} 101,483 \\ \times \quad 50 \\ \hline \end{array}$$

$$\begin{array}{r} 492,655 \\ \times \quad 17 \\ \hline \end{array}$$

Algebra: Patterns in Decimal Factors and Products

Use mental math to complete.

1. $1 \times 0.007 = 0.007$

$10 \times 0.007 = 0.07$

$100 \times 0.007 = 0.7$

$1,000 \times 0.007 = \square$

2. $1 \times 0.034 = 0.034$

$10 \times 0.034 = 0.34$

$100 \times 0.034 = \square$

$1,000 \times 0.034 = 34$

3. $1 \times 0.0061 = 0.0061$

$10 \times 0.0061 = \square$

$100 \times 0.0061 = 0.61$

$1,000 \times 0.0061 = \square$

4. $1 \times 0.53 = 0.53$

$10 \times 0.53 = \square$

$100 \times 0.53 = \square$

$1,000 \times 0.53 = 530$

5. $1 \times 0.0817 = 0.0817$

$10 \times 0.0817 = \square$

$100 \times 0.0817 = \square$

$1,000 \times 0.0817 = \square$

6. $1 \times 0.49 = 0.49$

$10 \times 0.49 = \square$

$100 \times 0.49 = \square$

$1,000 \times 0.49 = \square$

Multiply each number by 10, by 100, and by 1,000.

7. 0.4

8. 0.16

9. 0.7832

10. \$0.17

11. \$1.19

12. 5.9173

Find the value of n .

13. $10 \times n = 8$

14. $100 \times 0.625 = n$

15. $n \times 100 = 0.7$

16. $1,000 \times 0.23 = n$

17. $100 \times n = 50$

18. $10 \times n = 50.3$

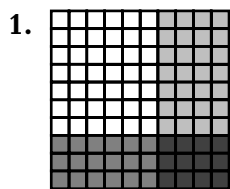
Mixed Review

19. What is the place value of the digit 6 in the number 162,083?

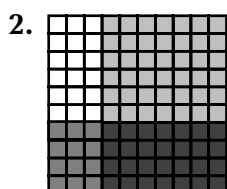
20. Which digits make
11. $\square 57 < 11.407$ true?

Model Decimal Multiplication

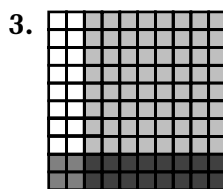
Complete the multiplication sentence for each model.



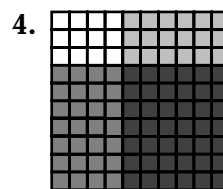
$$0.3 \times 0.4 = n$$



$$n \times 0.7 = 0.28$$



$$n \times 0.8 = 0.16$$



$$0.7 \times n = 0.42$$

Make a model to find the product.

5. 0.4×0.6

6. 0.1×0.5

7. 0.8×0.3

8. 0.6×0.9

Find the product.

9. 0.7×0.6 _____

10. 0.4×0.9 _____

11. 0.9×0.3 _____

12. 0.8×0.6 _____

13. 0.2×0.5 _____

14. 0.5×0.3 _____

15. 0.8×0.5 _____

16. 0.1×0.9 _____

17. 0.4×0.4 _____

18. 0.7×0.5 _____

19. 0.2×0.6 _____

20. 0.6×0.6 _____

21. 0.5×0.4 _____

22. 0.8×0.7 _____

23. 0.9×0.5 _____

24. 0.6×0.3 _____

25. 0.4×0.2 _____

26. 0.7×0.7 _____

Find the value of n .

27. $n \times 0.3 = 0.15$

28. $0.7 \times n = 0.56$

29. $n \times 0.6 = 0.36$

30. $0.9 \times n = 0.36$

Mixed Review

31. $3.6 + 4.3$

32. $7.6 + 0.75$

33. $16.3 + 0.07$

34. $6.3 + 1.48$

Multiply by 2-Digit Numbers

Find each product. Estimate to check.

1.
$$\begin{array}{r} 24 \\ \times 46 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 16 \\ \times 37 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 43 \\ \times 54 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 74 \\ \times 47 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 246 \\ \times 22 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 137 \\ \times 65 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 758 \\ \times 14 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 420 \\ \times 31 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 2,474 \\ \times 16 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 3,245 \\ \times 25 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 4,080 \\ \times 35 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 1,625 \\ \times 30 \\ \hline \end{array}$$

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

13. $13 \times 28 \bigcirc 25 \times 14$

14. $24 \times 12 \bigcirc 16 \times 18$

15. $123 \times 15 \bigcirc 124 \times 16$

16. $33 \times 45 \bigcirc 45 \times 33$

17. $231 \times 21 \bigcirc 213 \times 31$

18. $2,002 \times 34 \bigcirc 2,020 \times 23$

Name _____

Date _____



LEAST COMMON MULTIPLE SHEET 1A

For each problem below, write out the lists of factors to find the LCM.

Remember – you only need to write out as many multiples as the other number.

Example: Find the least common multiple of 10 and 4.

Multiples of 10: 10, 20, 30, 40, ... **Multiples of 4:** 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, ...

The common multiples of 10 and 4 are: 20, 40, ...

The least common multiple (the smallest number occurring in both lists) is 20.

1) Find the least common multiple of 4 and 6.

Multiples of 4: _____ Multiples of 6: _____

Least common multiple is _____.

2) Find the least common multiple of 3 and 5.

Multiples of 3: _____ Multiples of 5: _____

Least common multiple is _____.

3) Find the least common multiple of 7 and 2.

Multiples of 7: _____ Multiples of 2: _____

Least common multiple is _____.

4) Find the least common multiple of 8 and 4.

Multiples of 8: _____ Multiples of 4: _____

Least common multiple is _____.



Form A (Master Copy)

RCK12 Fifth Grade Unit 1 Pre Assessment

Directions: Please choose the best answer choice for each of the following questions.

1. Noah saved \$60. Then he spent \$45 on a baseball bat and \$3 on a baseball. Using the expression $60 - (45 + 3)$, how much money did Noah have left?
 - A. \$10
 - B. \$12
 - C. \$15
 - D. \$18
2. The library purchased 10 sets of books at \$68 each and 8 desks at \$47 each. The expression $(10 \times 68) - (8 \times 47)$ can be used to find how much more the books cost than the desks. How much more did the books cost than the desks?
 - A. \$304
 - B. \$311
 - C. \$647
 - D. \$1,056
3. Rebecca has a part-time job as a dog walker. Each week she walks 9 dogs. She gets paid \$10 a week, plus \$2 for each dog she walks. Which expression can be used to find how much Rebecca makes in one week?
 - A. $10 + 2 + 9$
 - B. $10 \times 2 + 9$
 - C. $10 + (2 \times 9)$
 - D. $10 \times (2 + 9)$
4. Pedro has 4,200 baseball cards that he wants to divide equally into 6 boxes. Which expression will BEST help Pedro estimate the number of cards to put into each box?
 - A. $4 \div 6$
 - B. $20 \div 6$
 - C. $40 \div 6$
 - D. $42 \div 6$
5. Tony made 12 batches of brownies. Each batch took 15 minutes to bake. Which expression describes the total time Tony spent baking brownies?
 - A. $15 - 12 = 3$
 - B. $12 \times 12 = 144$
 - C. $12 + 15 = 27$
 - D. $12 \times 15 = 180$
6. Two groups of students arranged 400 tiles into equal stacks. Group A arranged its tiles so that 40 tiles were in each stack. Group B arranged its tiles so that 50 tiles were in each stack. What is the difference in the number of stacks each group made?
 - A. Group A made 20 more stacks than Group B.
 - B. Group B made 20 more stacks than Group A.
 - C. Group A made 2 more stacks than Group B.
 - D. Group B made 2 more stacks than Group A.
7. How does the value of the digit 8 in the number 800 compare to the value of the digit 8 in the number 80?
 - A. The value of 8 in 800 is one-tenth the value of 8 in 80.
 - B. The value of 8 in 800 is equal to the value of 8 in 80.
 - C. The value of 8 in 800 is ten times the value of 8 in 80.
 - D. The value of 8 in 800 is one hundred times the value of 8 in 80.
8. Which of these is correct?
 - A. $18 \times 10^2 = 18$
 $18 \times 10^3 = 1,800$
 $18 \times 10^4 = 18,000$
 $18 \times 10^2 = 180$
 - B. $18 \times 10^3 = 18,000$
 $18 \times 10^4 = 180,000$
 $18 \times 10^2 = 1,800$
 - C. $18 \times 10^3 = 18,000$
 $18 \times 10^4 = 180,000$
 $18 \times 10^2 = 18,000$
 - D. $18 \times 10^3 = 180,000$
 $18 \times 10^4 = 1,800,000$
9. What is the product of $6,309 \times 27$?
 - A. 192,713
 - B. 170,343
 - C. 168,186
 - D. 56,781

Go on to the next page »

10. Ella slept 480 minutes each day for 7 days. How many minutes in all did Ella sleep during the 7 days?
A. 2,660
B. 3,360
C. 3,430
D. 6,360
11. The mass of one slice of bread is 43 grams. A loaf of bread contains 16 slices. What is the total mass of the loaf of bread?
A. 59 grams
B. 301 grams
C. 688 grams
D. 751 grams
12. Mr. Jackson has 48 students. He puts the students into 8 equal groups. Each group is then divided into 2 teams. To find how many students are on each team, he uses the expression $(48 \div 8) \div 2$. How many students are on each team?
A. 3 students
B. 6 students
C. 8 students
D. 12 students
13. This year, Mrs. Wilkes has 380 pencils for the children in her class. She wants to give each of the 23 children the same number of pencils. If she gives each child as many pencils as possible, how many will she have left?
A. 2 pencils
B. 4 pencils
C. 12 pencils
D. 28 pencils
14. The band members collected \$1,382 in January and \$1,222 in February to help fund their spring trip. If the money is divided equally among 84 band members, how much will each person receive to cover expenses?
A. \$18
B. \$29
C. \$31
D. \$42
15. What is $2,008 \div 5$?
A. 41 R3
B. 401 R3
C. 416 R0
D. 3,101 R3
16. Peggy bakes 135 cupcakes for a bake sale. She plans to put them in packages that hold 9 cupcakes each. How many packages does she need?
A. 10
B. 15
C. 144
D. 1,215
17. What is the product of 32.5×100 ?
A. 0.325
B. 325
C. 3,250
D. 32,500
18. Damon has a cat named Leo. Leo's heart beats 200 times per minute. How many times does Leo's heart beat in one hour?
A. 12
B. 120
C. 1,200
D. 12,000
19. The Movie Center had ticket sales of \$210,000 one weekend for 300 movie showings. The Movie Plex had ticket sales of \$48,000 for 80 movie showings that same weekend.
 - How much money did the Movie Center make per showing?
 - How much money did Movie Plex make per showing?
 - What is the difference in the amount of money made per showing for the two theaters?
 - Show or explain how basic facts and place value can help you find the answers to these questions.

Use words, numbers, and/or pictures to show your work. Enter your answer in the space provided.

20. Show two ways this equation can be written as a division problem.

$$4 \times 5 = 20$$

Use words, numbers, and/or pictures to show your work. Enter your answer in the space provided.

Stop! You have finished this exam.

Form A (Master Copy)

RCK12 Fifth Grade Unit 3 Post Assessment

Directions: Please choose the best answer choice for each of the following questions.

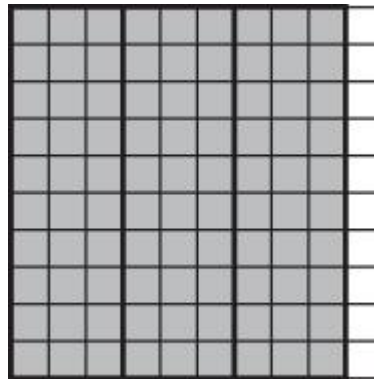
1. The amount of change Marie Elena got back after mailing some letters at the post office is shown by the expression below.

$$5.00 - 2 \times (0.37 + 6 \times 0.23)$$

How much change did Marie Elena get back?

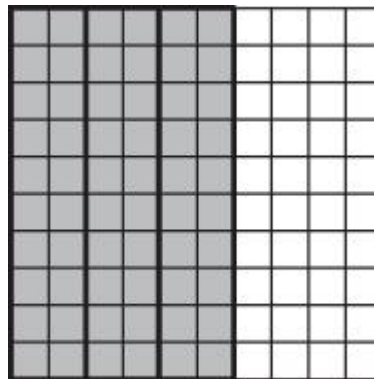
- A. \$1.50
B. \$1.64
C. \$2.07
D. \$2.88
2. Tracie bought a notebook and a backpack. The notebook cost \$2.50. The backpack cost 10 times as much. What was the cost of the backpack?
- A. \$12.50
B. \$20.50
C. \$22.50
D. \$25.00
3. Mr. Shultz bought 8 weekly passes for his family members to attend the county fair. The passes were \$18.50 each. What was the total cost of the passes?
- A. \$14.80
B. \$18.50
C. \$144.40
D. \$148.00
4. Basmah bought 6 pears for \$4.80. Each pear cost the same. How much did each cost?
- A. \$0.08
B. \$0.48
C. \$0.60
D. \$0.80
5. Each chapter of Michela's book is 0.1 of the entire book. How many chapters are in her book?
- A. 1 chapter
B. 10 chapters
C. 100 chapters
D. 1,000 chapters

6.



What problem would this model help you solve?

- A. $0.9 \div 0.3$
B. $9 \div 0.3$
C. 0.9×0.3
D. $0.9 + 0.3$
7. Eldora knows that a dime is one-tenth of a dollar. She has saved three hundred forty-six dimes. What is the value of Eldora's dimes?
- A. \$3.46
B. \$34.60
C. \$346.00
D. \$3,460.00
- 8.



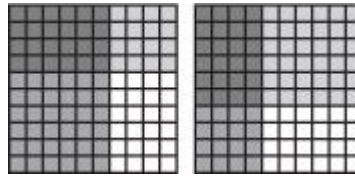
Based on this model, what is $0.6 \div 0.2$?

- A. 0.3
B. 3
C. 20
D. 60

Go on to the next page »

9. Amir used a computer to create a presentation for class. The file size of the presentation was 3.28 megabytes. After adding some photos and charts to the presentation, the file size was 5.1 megabytes. What was the total size of the photos and charts he added?
- 1.82 megabytes
 - 1.98 megabytes
 - 2.18 megabytes
 - 2.77 megabytes
10. Mr. Paul has \$276.20 in his savings account. He deposits another \$64. How much money does he have after the deposit?
- \$276.84
 - \$340.20
 - \$826.00
 - \$916.20
11. An electric clothes dryer, on average, uses 3.70 kWh. If Sarah's family uses the clothes dryer for 2 hours each day, how many kWh does it use each week?
- 5,180
 - 51.80
 - 5.180
 - .5180
12. Oscar was in charge of buying uniforms for his volleyball team. He bought 6 uniforms at \$26.75 each. What was the total cost of the uniforms?
- \$16.05
 - \$160.50
 - \$1,605.00
 - \$16,050.00
13. A hot lunch costs \$2.75, and a drink costs \$0.50. Which expression could be used to correctly find the cost of lunches and drinks for 3 days?
- $3 \times (2.75 + 3) \times 0.50$
 - $3 \times (2.75 + 0.50)$
 - $3 \times 2.75 + 3.50$
 - $3 \times 2.75 + 0.50$

14.



How are these two models alike? How are they different? What mathematical problems do they represent, including the answer? Use words, numbers, and/or pictures to show your work. Enter your answer in the space provided.

15. Nate wants to buy 5 colored markers. Jaime wants to buy 6 colored pencils. The markers cost \$1.25 each and the pencils cost \$1.05 each. Who will spend more money? Explain your answer.

Use words, numbers, and/or pictures to show your work.

Enter your answer in the space provided.

Stop! You have finished this exam.

Directions: Please choose the best answer choice for each of the following questions.
--

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

- A. 9
- B. 4
- C. 3
- D. 1

2. Carol has $2\frac{1}{2}$ strawberry pies left over from a family reunion. If each serving is $\frac{1}{8}$ of a pie, how many servings does she have?

- A. $\frac{1}{2}$
- B. 2
- C. 8
- D. 20

3. Jeremy and Nicole had a total of 148 apples to sell at their fruit stand.

- If 12 customers each bought an equal number of apples, how many would they have sold to each customer?
- How many apples would be left over at the end of the day?
- Show the steps you take to find your answer(s).

Use words, numbers, and/or pictures to show your work. Write your answer(s) on the paper provided.

4. Erika drove 1407 miles to visit her brother. She drove for a total of 25 hours. If she drove the same distance each hour, how many miles did Erika drive each hour?

- A. 56.28
- B. 56.7
- C. 57.28
- D. 57.7

5. Arthur purchases the same food every day for lunch. He buys a grilled cheese sandwich for \$0.75, an apple for \$0.40, and milk for \$0.45. How much money will Arthur need to buy lunch for five days?

Use words, numbers, and/or pictures to show your work. Write your answer(s) on the paper provided.

6. Clara is putting magazines on a shelf. The shelf is 35.5 inches long, and each magazine is about 0.75 inch thick. About how many magazines can Clara place on the shelf?

- A. 25
- B. 35
- C. 50
- D. 70

7. Rachel has 24 blue paper clips, 16 red paper clips, and 36 yellow paper clips. She plans to use a common factor to sort the paper clips into small groups. What are the common factors of 16, 24, and 36?

- A. 1, 2, and 4
- B. 1, 2, 3, and 4
- C. 1, 2, 4, and 6
- D. 1, 2, 6, and 12

8. Starting October 1st, Theo has a piano lesson every 5 days and a guitar lesson every 7 days.

- On how many days will Theo have both lessons on the same day? Explain.
- Starting December 1st, Theo changes his schedule for piano and guitar lessons. According to the new schedule, both his lessons fall on the same day every 27 days. If he has more piano lessons than guitar lessons, how often does he have each lesson? Explain your answer.

Use words, numbers, and/or pictures to show your work. Write your answer(s) on the paper provided.

9. Mr. Harris painted 85 identical apartments. He used the same amount of paint in each apartment. He used a total of 1343 gallons of paint. How many gallons of paint did he use for one apartment?

- A. $16\frac{83}{85}$
- B. $15\frac{83}{78}$
- C. $15\frac{14}{17}$
- D. $15\frac{4}{5}$

10. A shoe manufacturer needs to deliver 1,440 pairs of shoes to a shoe store. The shoes are shipped in big boxes. Each box holds 25 pairs of shoes. How many boxes will the manufacturer need for shipping 1,440 pairs of shoes?

- A. at least 56 boxes
- B. at least 57 boxes
- C. at least 58 boxes
- D. at least 60 boxes

11. What is $330,010 \div 11$?

- A. 300 R10
- B. 3,000 R10
- C. 30,000 R10
- D. 300,000 R10

12. A hiking trail is $2\frac{1}{4}$ miles long. Along the way there are 12 evenly spaced markers. How far apart is each marker?

- A. $\frac{3}{16}$ mile
- B. $\frac{1}{2}$ mile
- C. $5\frac{1}{3}$ miles
- D. 27 miles

13. A hotel advertises that the cost for a 6-night stay is \$524.99. If each night costs the same, what is the cost for each night, to the nearest whole number?

- A. \$84
- B. \$87
- C. \$88
- D. \$89

14. Donna paid \$5.69 for a 48-ounce container of soap. What is a reasonable estimate for the unit cost per ounce of soap?

- A. \$0.08
- B. \$0.12
- C. \$0.80
- D. \$1.20

Stop! You have finished this exam.