Key

Math Fundamentals Unit 1 Pre-Test

Write a variable expression for each word phrase.

1.) The product of a number and 4.

$n * 4$

2.) The sum of k and 7.

$k + 7$

3.) The difference between 12 and b.

$12 - b$

4.) The quotient of f and 11.

$\frac{f}{11}$ or $f \div 11$

5.) 3 less than g.

$g - 3$

Find the rule the pattern is using. Determine the next number in the sequence.

1.) 11, 17, 23, 29, 35...

+6 +6 +6 +6

Add 6 (+6)

$35 + 6 = 41$

2.) 4 , 12 , 36 , 108...

×3 ×3 ×3

Multiply by 3 (×3)

$108 \times 3 = 324$

3.) 29, 24, 19, 14...

−5 −5 −5

Subtract 5

$14 - 5 = 9$

4.) 128, 64, 32, 16...

÷2 ÷2 ÷2

Divide by 2 (take half)

÷2

16 ÷ 2 = 8

1.) What is the relationship between the input and output?

In	4	6	10	2
Out	24	36	60	12

×6 ×6 ×6 ×6

×6

Multiply by 6

2.) What is the relationship between the input and output?

In	9	4	2	12
Out	12	7	5	15

+3 +3 +3 +3

Input + 3 (Add 3)

3.) What is the relationship between the input and output?

In	6	10	3	14
Out	4	8	1	12

-2 -2 -2 -2

Input - 2 (Subtract 2)

4.) A pattern starts with 3. The second number is a 6. The third is a 9. Fourth is a 12 and fifth is 15. If the pattern continues, what is the identity of the 15th number?

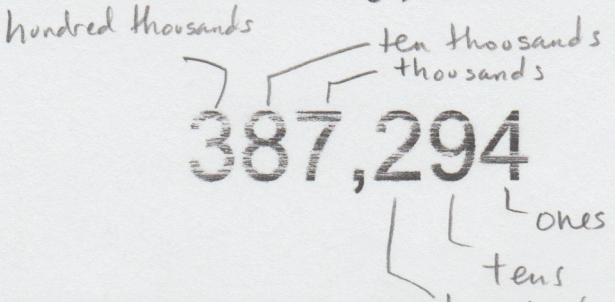
1 →×3→ 3, 2 →×3→ 6, 3 →×3→ 9, 4 →×3→ 12, 5 →×3→ 15, 15 →×3→ 45

5.) A pattern starts with 1. The second number is a 4. The third is a 9. Fourth is a 16 and fifth is 25. If the pattern continues, what is the identity of the 9th number?

1 →×1→ 1, 2 →×2→ 4, 3 →×3→ 9, 4 →×4→ 16, 5 →×5→ 25, 9 →×9→ 81

The pattern is the input number squared (or times itself)

1.) Use the number below to answer the following questions:



a) Which number occupies the ten thousands place? 8

b) The 9 digit is in which place value? tens

c) The 8 digit is in which place value? ten thousands

d) Which number occupies the hundred thousands place? 3

e) The 2 digit is in which place value? hundreds

Write the following number in both written and expanded form:

374,815

Written: Three hundred seventy four thousand eight hundred fifteen

Expanded: $5 + 10 + 800 + 4{,}000 + 70{,}000 + 300{,}000$

$1(10) + 8(100) + 4(1{,}000) + 7(10{,}000) + 3(100{,}000)$

Write the following number in both written and expanded form:

708,972

Written: Seven hundred eight thousand nine hundred seventy two

Expanded: $2 + 70 + 900 + 8{,}000 + 700{,}000$

$7(10) + 9(100) + 8(1{,}000) + 7(100{,}000)$

Write the following number in both written and expanded form:

98,024

Written: Ninety eight thousand twenty-four

Expanded: $4 + 20 + 8{,}000 + 90{,}000$

$2(10) + 8(1{,}000) + 9(10{,}000)$

1.) Use the number below to answer the following questions:

ones tenths hundredths thousandths ten thousandths hundred thousandths

4.93728

f) Which number occupies the ten thousandths place?

2

g) The 9 digit is in which place value?

tenths

h) The 8 digit is in which place value?

hundred thousandths

i) Which number occupies the hundredths place?

3

j) The 2 digit is in which place value?

ten thousandths

1.) Use an inequality sign to compare the value of the two numbers.

3.299999 $<$ 3.3

2.009 $<$ 2.8

8.099 $<$ 8.1

7.0000 $=$ 7

2.) Round the following numbers to the nearest hundredth:

5.786 = 5.79

3.052 = 3.05

3.) Round the following numbers to the nearest tenth:

4.309 = 4.3

9.153 = 9.2

4.) Round the following numbers to the nearest hundredth:

5.995 = 6.00

6.050 = 6.05

1.) a) Write the number two and eight hundred twenty-five thousandths in number form.

2.825

b) Write the number seven and seventy-two hundredths in number form.

7.72

c) Write the number nine and three hundredths in number form.

9.03

d) Write the number eight and ninety-one thousandths in number form.

8.091

2.) Write the following number in both written and expanded form:

3.274

Written: Three and two hundred seventy four thousandths

Expanded: $3 + 2/10 + 7/100 + 4/1,000$

3.) Write the following number in both written and expanded form:

5.023

Written: Five and twenty three thousandths

Expanded: $5 + 2/100 + 3/1,000$

4.) Write the following number in both written and expanded form:

2.904

Written: Two and nine hundred four thousandths

Expanded: $2 + 9/10 + 4/1,000$

1.) Solve.

If 8 × 7 = 56, what is 8,000 × 70?

560000

If 4 × 6 = 24, what is 400 × 600?

240000

If 48 ÷ 8 = 6, what is 48,000 ÷ 800?

6000 = 60

If 84 ÷ 12 = 7, what is 8,400,000 ÷ 120?

700,000 70,000

1.) Solve.

$$\begin{array}{r} 6 \\ 809 \\ \times\ 17 \\ \hline 5663 \\ 8090 \\ \hline 13753 \end{array}$$

2.) Solve.

$$\begin{array}{r} 23 \\ 235 \\ \times\ 60 \\ \hline 000 \\ 14100 \\ \hline 14100 \end{array}$$

3.) Solve.

$$\begin{array}{r} 190 \\ \times\ 24 \\ \hline 760 \\ 3800 \\ \hline 4560 \end{array}$$

4.) Solve.

$$\begin{array}{r} 702 \\ \times\ 51 \\ \hline 702 \\ 35100 \\ \hline 35802 \end{array}$$

1.) Nate ate 238 cookies every day for 42 days. How many cookies did he eat in all? Why does Nate eat his feelings?

$$\begin{array}{r} 238 \\ \times\ 42 \\ \hline 476 \\ 9520 \\ \hline 9996 \end{array}$$ cookies

Because his feelings are delicious!

2.) Matilda made $563 each day selling her outrageously additive lemonade. If she sold lemonade every day for 65 days, how much monies would she make? What could possibly be in the lemonade?

$$\begin{array}{r} 563 \\ \times\ 65 \\ \hline 2815 \\ 33780 \\ \hline 36595 \end{array}$$

Joy. Joy is in the lemonade.

Solve.

1.) 836 ÷ 22

$$\begin{array}{r} 38 \\ 22\overline{)836} \\ -66 \\ \hline 176 \\ -176 \\ \hline 0 \end{array}$$

38

2.) 455 ÷ 13

$$\begin{array}{r} 35 \\ 13\overline{)455} \\ -39 \\ \hline 65 \\ -65 \\ \hline 0 \end{array}$$

35

3.) 954 ÷ 53

$$\begin{array}{r} 18 \\ 53\overline{)954} \\ -53 \\ \hline 424 \\ -424 \\ \hline 0 \end{array}$$

18

4.) 992 ÷ 16

$$\begin{array}{r} 62 \\ 16\overline{)992} \\ -96 \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$$

62