Why Did the Horse Eat With Its Mouth Open?

Write the prime factorization for each number. Find your answer in the adjacent answer list. Write the letter of the answer in each box containing the number of the exercise.

(1) 12	(2) 20	(3) 35	(U) $2 \times 3 \times 5$ (B) $2^2 \times 3$ (E) 5×7 (G) $2^2 \times 7$ (H) $2^2 \times 5$
(4) 36	(5) 75	(6) 99	(D) 3×5^2 (J) 2×3^2 (M) $3^2 \times 11$ (R) $2^2 \times 3^2$ (F) $2 \times 5 \times 11$
(7) 60	(8) 56	(9) 26	(K) 23×5 (I) 2×13 (C) $2 \times 5 \times 7$ (L) $2^3 \times 7$ (S) $2^2 \times 3 \times 5$
(10) 81	(11) 100	(12) 90	(A) $2^2 \times 5^2$ (O) 2×3^3 (N) 3^4 (T) $2 \times 3^2 \times 5$ (P) $2^3 \times 3 \times 5$

9	12	2	11	5	1	11	5	7	12	11	1	8	3	6	11	10	10	3	4	7

Tic Tac Toe

*Factors, Primes, and Composites

1. Find two numbers that have exactly 4 factors (2pairs). List the numbers and the factors.
2. Find two numbers that have exactly 6 factors (3 pairs). List the numbers and the factors.
3. Find how many factors that the number 51 has. List them.
4. Count the number of cubbies. Is this prime or composite? If composite, list the factors of this number.
5. Count the number of students and teachers in this room. Is this prime of composite? If composite, list the factors of this number.
6. List the first 10 prime numbers.
7. Draw all of the arrays to model the factors of 48.
8. Draw all of the arrays to model the factors of 56.
9. Add all of the grades that you will have completed when you graduate (1 + 2 + 3 + 4…through 12). Is this number prime or composite? If composite, list the factors of this number.

1	4	2
7	8	5
6	3	9

*Choose 3 in a row to make a Tic-Tac-Toe!

Complete your 3 on a separate sheet.

HOW CAN YOU TELL IF A SHARK LIKES YOU?

Find the greatest common factor (GCF) for each pair of numbers. Write the letter next to the answer in the box containing the exercise number. If the answer has a ●, shade in the box instead of writing a letter in it.

(1) GCF of 14 and 21
(2) GCF of 10 and 12
(3) GCF of 15 and 25
(4) GCF of 6 and 15
(5) GCF of 36 and 27
(6) GCF of 22 and 33
(7) GCF of 60 and 20

Answers 1 – 7:

(P)	1	(N)	8
(E)	2	●	9
(I)	3	(T)	11
(A)	5	(L)	12
(O)	6	(E)	20
(S)	7	(R)	30

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(8) GCF of 12 and 9
(9) GCF of 24 and 16
(10) GCF of 45 and 20
(11) GCF of 12 and 42
(12) GCF of 30 and 50
(13) GCF of 36 and 12
(14) GCF of 100 and 250

Answers 8 – 14:

(W)	1	(N)	9
(O)	3	(A)	10
●	5	(R)	12
(E)	6	●	15
(L)	7	(C)	40
(H)	8	(T)	50

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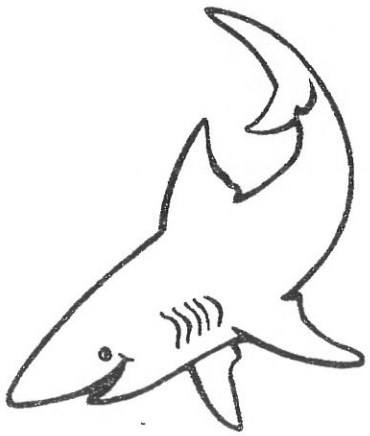
(15) GCF of 24 and 30
(16) GCF of 8 and 15
(17) GCF of 28 and 12
(18) GCF of 18 and 40
(19) GCF of 64 and 16
(20) GCF of 30 and 75
(21) GCF of 180 and 54

Answers 15 – 21:

●	1	(A)	10
(T)	2	●	12
(N)	4	(H)	15
(E)	6	(K)	16
(S)	7	(B)	18
(G)	9	(R)	24



9	15	5	14	12	19	7	1	16	3	17	8	6	20	2	13	10	21	4	18	11

Why Did Igor Spend 10 Years Studying Geology?

Find the least common multiple (LCM) for each pair of numbers. Look for your answer in the set of boxes under the exercise. Write the letter of the exercise in the box containing the answer.

(T) LCM of 3 and 5

(E) LCM of 4 and 6

(A) LCM of 2 and 9

(O) LCM of 10 and 4

(H) LCM of 9 and 12

(E) LCM of 6 and 5

(B) LCM of 7 and 21

(W) LCM of 10 and 70

(D) LCM of 5 and 2

(E) LCM of 15 and 9

(T) LCM of 11 and 8

(N) LCM of 12 and 20

36	45	72	70	18	60	15	30	10	180	88	20	90	21	12

(S) LCM of 8 and 6

(A) LCM of 15 and 25

(O) LCM of 4 and 8

(I) LCM of 6 and 9

(K) LCM of 8 and 10

(A) LCM of 9 and 4

(B) LCM of 10 and 6

(R) LCM of 7 and 8

(G) LCM of 25 and 10

(C) LCM of 45 and 15

(R) LCM of 30 and 40

(T) LCM of 24 and 9

75	180	30	18	50	48	120	8	45	40	150	24	72	36	56

Why Is It Dangerous to Do Math in the Jungle?

Mark each box containing a number that does *not* belong in that row. Then write the letters from these boxes on the lines at the right.

Multiples of 5	0 T	5 S	10 A	15 H	18 I	20 X	25 S	30 E	35 T	36 F	40 N	45 O	50 P	____
Multiples of 2	0 B	2 T	4 A	5 Y	6 E	8 A	10 I	11 O	12 L	14 K	16 G	17 U	18 A	____
Multiples of 8	0 N	4 A	8 L	16 S	24 K	32 L	40 R	44 D	48 E	50 D	56 E	64 D	72 N	____
Multiples of 3	0 K	3 N	6 U	9 M	12 I	14 T	15 H	18 B	21 R	24 E	26 W	27 N	28 O	____
Multiples of 6	0 P	6 L	12 O	15 A	18 R	24 F	30 E	36 T	40 N	42 S	48 T	52 D	54 E	____
Multiples of 9	0 F	9 I	18 T	27 W	36 H	42 S	45 E	54 O	63 V	66 I	72 E	81 N	84 X	____
Multiples of 4	0 T	4 H	6 Y	8 A	12 E	16 S	18 O	20 V	24 N	28 G	31 U	32 L	36 R	____
Multiples of 7	0 H	7 C	14 A	21 V	24 W	28 N	35 E	39 I	42 S	44 L	45 L	49 H	56 S	____
Even Numbers	6 S	11 G	14 O	10 A	2 I	16 N	8 O	12 U	0 R	4 O	15 E	10 W	9 T	____
Odd Numbers	5 E	13 T	17 E	7 I	18 A	19 L	1 G	15 R	11 H	0 T	3 S	2 E	9 M	____

name _____ date _____

Directions: Use your notes on Rules of Divisibility to complete this page. Circle each divisor that the number is divisible by.

1. **432**

is this number divisible by...

2 3 4 5 6 7 8 9 10

2. **357**

is this number divisible by...

2 3 4 5 6 7 8 9 10

3. **2,360**

is this number divisible by...

2 3 4 5 6 7 8 9 10

4. **5,671**

is this number divisible by...

2 3 4 5 6 7 8 9 10

5. **16,303**

is this number divisible by...

2 3 4 5 6 7 8 9 10

6. **38,475**

is this number divisible by...

2 3 4 5 6 7 8 9 10

7. **400,005**

is this number divisible by...

2 3 4 5 6 7 8 9 10

8. **782,340**

is this number divisible by...

2 3 4 5 6 7 8 9 10

9. **7,321,694**

is this number divisible by...

2 3 4 5 6 7 8 9 10

10. **6,862,356**

is this number divisible by...

2 3 4 5 6 7 8 9 10