

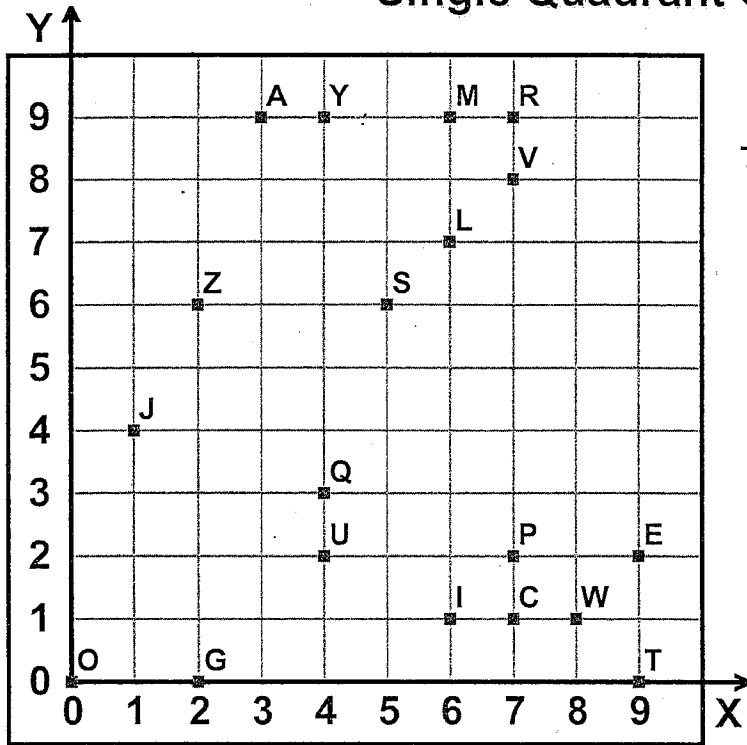
Name : _____

Score : _____

Teacher : _____

Date : _____

Single Quadrant Ordered Pairs



Tell what point is located at each ordered pair.

1) (7,9) _____ 6) (6,7) _____

2) (8,1) _____ 7) (2,0) _____

3) (6,9) _____ 8) (5,6) _____

4) (3,9) _____ 9) (7,2) _____

5) (7,1) _____ 10) (2,6) _____

Write the ordered pair for each given point.

11) T _____

14) I _____

17) E _____

12) J _____

15) U _____

18) Y _____

13) Q _____

16) V _____

19) O _____

Plot the following points on the coordinate grid.

20) D (6,4)

22) F (2,1)

24) N (5,1)

21) X (5,0)

23) B (8,8)

25) H (7,3)



Case of the Stolen Factors



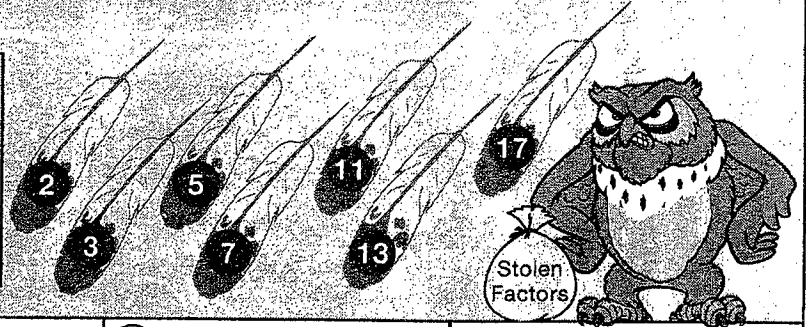
Ollie The Owl has stolen a factor from each of the twenty factorizations below. Luckily, Ollie has left a clue: several feathers that contain all the stolen factors! Help me solve this case. Complete each factorization by identifying the stolen factor and writing it in the blank space.

EXAMPLE:

Which factor was stolen?

$$12 = 2 \times \underline{2} \times 3$$

$$2 \times 3 = 6, 6 \times \underline{2} = 12$$



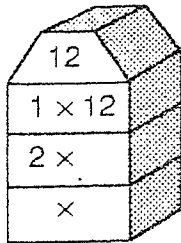
<p>① Which factor was stolen?</p> <p>$18 = 2 \times \underline{\quad} \times 3$</p>	<p>⑥ Which factor was stolen?</p> <p>$32 = 2 \times 2 \times 2 \times 2 \times \underline{\quad}$</p>	<p>⑪ Which factor was stolen?</p> <p>$75 = 3 \times 5 \times \underline{\quad}$</p>	<p>⑬ Which factor was stolen?</p> <p>$78 = 2 \times 3 \times \underline{\quad}$</p>
<p>② Which factor was stolen?</p> <p>$45 = 3 \times 3 \times \underline{\quad}$</p>	<p>⑦ Which factor was stolen?</p> <p>$24 = 2 \times 2 \times 2 \times \underline{\quad}$</p>	<p>⑫ Which factor was stolen?</p> <p>$110 = 2 \times 5 \times \underline{\quad}$</p>	<p>⑭ Which factor was stolen?</p> <p>$180 = 2 \times \underline{\quad} \times 3 \times 3 \times 5$</p>
<p>③ Which factor was stolen?</p> <p>$28 = 2 \times \underline{\quad} \times 7$</p>	<p>⑧ Which factor was stolen?</p> <p>$30 = 2 \times 3 \times \underline{\quad}$</p>	<p>⑬ Which factor was stolen?</p> <p>$66 = 2 \times \underline{\quad} \times 11$</p>	<p>⑮ Which factor was stolen?</p> <p>$140 = 2 \times 2 \times 5 \times \underline{\quad}$</p>
<p>④ Which factor was stolen?</p> <p>$44 = 2 \times 2 \times \underline{\quad}$</p>	<p>⑨ Which factor was stolen?</p> <p>$68 = 2 \times 2 \times \underline{\quad}$</p>	<p>⑭ Which factor was stolen?</p> <p>$70 = \underline{\quad} \times 5 \times 7$</p>	<p>⑯ Which factor was stolen?</p> <p>$63 = 3 \times \underline{\quad} \times 7$</p>
<p>⑤ Which factor was stolen?</p> <p>$42 = 2 \times 3 \times \underline{\quad}$</p>	<p>⑩ Which factor was stolen?</p> <p>$52 = 2 \times 2 \times \underline{\quad}$</p>	<p>⑮ Which factor was stolen?</p> <p>$170 = 2 \times 5 \times \underline{\quad}$</p>	<p>⑰ Which factor was stolen?</p> <p>$100 = 2 \times 2 \times \underline{\quad} \times 5$</p>

Name: _____

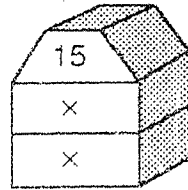
Factor Towers

Write a pair of factors in each "story" of the factor tower. Then count the number of *different* factors and write this number in the blank.

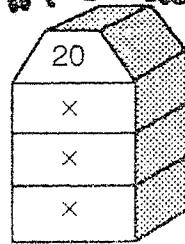
***List them in Order.**



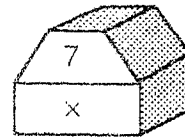
Number of factors _____



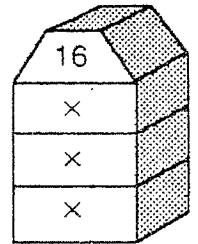
Number of factors _____



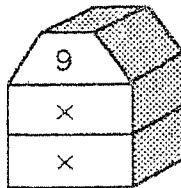
Number of factors _____



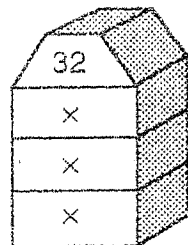
Number of factors _____



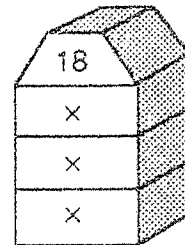
Number of factors _____



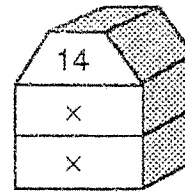
Number of factors _____



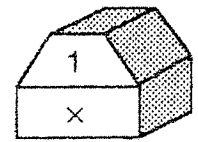
Number of factors _____



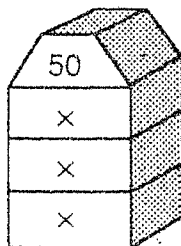
Number of factors _____



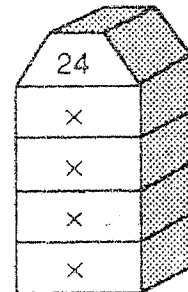
Number of factors _____



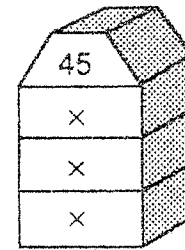
Number of factors _____



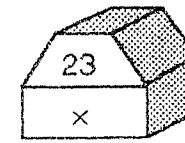
Number of factors _____



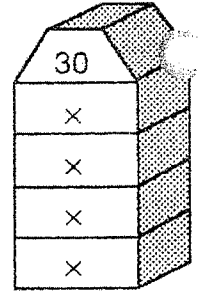
Number of factors _____



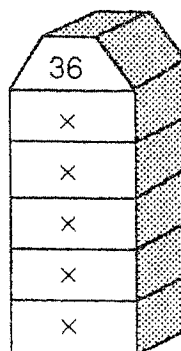
Number of factors _____



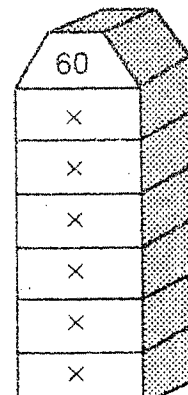
Number of factors _____



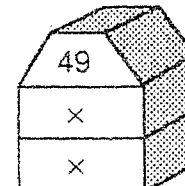
Number of factors _____



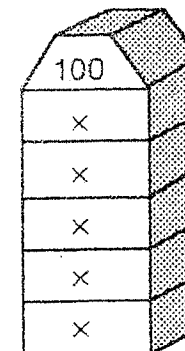
Number of factors _____



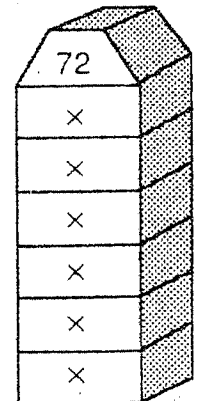
Number of factors _____



Number of factors _____



Number of factors _____



Number of factors _____

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	5	10	15	18	20	25	30	35	36	40	45	50	
	T	S	A	H	I	X	S	E	T	F	N	O	P	_____

Multiples of 2	0	2	4	5	6	8	10	11	12	14	16	17	18	
	B	T	A	Y	E	A	I	O	L	K	G	U	A	_____

Multiples of 8	0	4	8	16	24	32	40	44	48	50	56	64	72	
	N	A	L	S	K	L	R	D	E	D	E	D	N	_____

Multiples of 3	0	3	6	9	12	14	15	18	21	24	26	27	28	
	K	N	U	M	I	T	H	B	R	E	W	N	O	_____

Multiples of 6	0	6	12	15	18	24	30	36	40	42	48	52	54	
	P	L	O	A	R	F	E	T	N	S	T	D	E	_____

Multiples of 9	0	9	18	27	36	42	45	54	63	66	72	81	84	
	F	I	T	W	H	S	E	O	V	I	E	N	X	_____

Multiples of 4	0	4	6	8	12	16	18	20	24	28	31	32	36	
	T	H	Y	A	E	S	O	V	N	G	U	L	R	_____

Multiples of 7	0	7	14	21	24	28	35	39	42	44	45	49	56	
	H	C	A	V	W	N	E	I	S	L	L	H	S	_____

Even Numbers	6	11	14	10	2	16	8	12	0	4	15	10	9	
	S	G	O	A	I	N	O	U	R	O	E	W	T	_____

Odd Numbers	5	13	17	7	18	19	1	15	11	0	3	2	9	
	E	T	E	I	A	L	G	R	H	T	S	E	M	_____

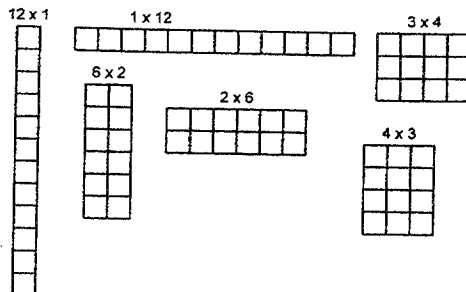
Prime and Composite Models (pp. 1 of 2)

Directions:

- A. For each number 1- 20, create as many rectangles as possible. For each number, use that many squares on your grid.

Rectangles can be made horizontally or vertically. Sides must touch. HINT: Squares are rectangles too.

For example, 12 is a **COMPOSITE NUMBER**. It has rectangular models other than 1 and 12 and 12 and 1.



- B. Record each number and its rectangles. Find the number of rectangles.
C. Cross-out the number in the number column that only has 1 rectangle.
D. Color the numbers in the number column that have exactly 2 rectangles PINK.
E. Color the numbers in the number column that have more than 2 rectangles YELLOW.

Number	Factors of Rectangles	Number of Rectangles Made
1		
2		
3		
4		
5		
6	1 × 6 6 × 1 3 × 2 2 × 3	4
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Prime and Composite Models (pp. 2 of 2)

Use the chart you created to answer the following questions:

- (1) Which numbers have only 2 rectangles (PINK)? These numbers are **PRIME** numbers. Prime numbers have exactly 2 different factors, 1 and itself. List the prime numbers from the chart here.
- (2) Which numbers have more than 2 rectangles (YELLOW)? These numbers are **COMPOSITE** numbers. Composite numbers have more than 2 factors. List the composite numbers from the chart here.
- (3) Write all the factors of each number. Then circle either **PRIME** or **COMPOSITE** next to each number.

7	_____	PRIME	COMPOSITE
14	_____	PRIME	COMPOSITE
21	_____	PRIME	COMPOSITE
25	_____	PRIME	COMPOSITE
17	_____	PRIME	COMPOSITE
31	_____	PRIME	COMPOSITE
19	_____	PRIME	COMPOSITE
9	_____	PRIME	COMPOSITE
35	_____	PRIME	COMPOSITE
18	_____	PRIME	COMPOSITE
30	_____	PRIME	COMPOSITE
28	_____	PRIME	COMPOSITE

Common Factor Practice Part 1

A math team has 24 female members and 30 male members. The coach wants to arrange the members in equal groups of all males or all females. In what ways can the coach arrange the groups?

- (1) List all the factors of each number.
- (2) Circle the common factors:
- (3) So the math team can be arranged in equal groups of _____.
- (4) What is the largest number of students that can be in one equal group? How do you know?

32 people at a bird sanctuary signed up for hiking and 20 people signed up for kayaking. They will be divided into smaller groups. In what ways can these groups be arranged?

- (5) List all the factors of each number.
- (6) Circle the common factors:
- (7) So the bird sanctuary groups can be arranged in equal groups of _____.
- (8) What is the largest number of people that can be in one equal group? How do you know?

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

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

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

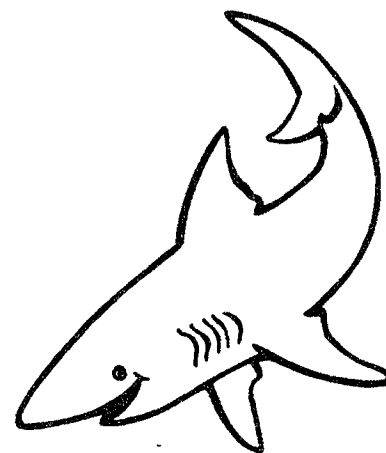
(T) 2 ● 12

(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
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Sign of the Primes

Exactly 106 of the squares below contain prime numbers. Shade in each of these 106 squares.

2	7	6	19	59	9	89	48	41	65	23	13	5	22	61	53	79	87	11	12
3	28	15	71	84	10	97	99	37	80	83	44	17	63	47	35	71	94	29	82
31	67	27	7	51	95	5	53	41	63	97	60	61	18	19	24	89	4	71	98
50	13	86	3	69	64	47	32	83	35	59	70	17	39	73	33	67	93	23	12
31	2	25	11	37	81	29	68	7	30	5	17	83	88	13	2	3	9	11	31
43	92	79	61	57	74	90	89	5	46	37	71	97	30	31	73	3	51	67	87
29	55	11	76	9	70	46	83	15	69	43	4	17	95	53	20	41	49	2	80
7	24	29	13	75	59	21	67	84	18	19	63	41	40	5	58	83	6	73	8
31	77	99	59	81	93	36	3	48	98	13	88	89	12	47	68	2	90	11	27
61	42	37	71	78	35	94	17	97	18	43	19	67	25	79	3	23	86	7	5

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 2 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 4 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 6 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 8 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 3 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 5 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 7 if...

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A number is divisible by 9 if...

<p>it is even. (It ends with a 0, 2, 4, 6, or 8.)</p>	<ol style="list-style-type: none"> 1. Add all the digits. 2. If the sum is divisible by 3, so is the number. (3, 6, 9, 12, 15,... - can use the hundreds chart to check) <p>Example: $645 = 6 + 4 + 5 = 15$</p>
<p>the last two digits are divisible by 4. (4, 8, 12, 16, 20,... - can use the hundreds chart to check)</p>	<p>it ends in a 5 or a 0.</p>
<p>it is divisible by BOTH 2 and 3. Both rules have to work.</p>	<ol style="list-style-type: none"> 1. Take the last digit and double it. 2. Subtract that from the remaining numbers. 3. Repeat until you have 1 or 2 digits. 4. Is that number divisible by 7? 5. If so, do a quick mental math division to double check.
<p>the last three digits in the number are divisible by 8.</p>	<ol style="list-style-type: none"> 1. Add all the digits. 2. If the sum is divisible by 9, so is the number. (9, 18, 27, 45, ... - can use the hundreds chart to check) <p>Example: $342 = 3 + 4 + 2 = 9$</p>

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