Name _____ Date _____

How Many Rectangles with 24 Tiles?

1. Use the Rectangles Chart in your classroom to fill in this table. You may also use square-inch tiles to help you. The first two lines are done for you.

Number of Rows	Number in Each Row	Division Sentence	Factors
1	24	24 ÷ 1 = 24	1, 24
2	12	24 ÷ 2 = 12	2, 12

2. Is 24 a multiple of 5? How do you know?

3. Is 3 a factor of 24? How do you know?

4. Is 24 a multiple of 9? How do you know?

5. List all the factors of 24.

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Name _____ Date _____

How Many Rectangles with _____ Tiles?

1. Fill in this table and list all the rectangles possible with the number of tiles your teacher tells you. You may use square-inch tiles to help you.

Number of Rows	Number in Each Row	Division Sentence	Factors

2. List all the factors of your number.

3. Is your number a multiple of 8? How do you know?
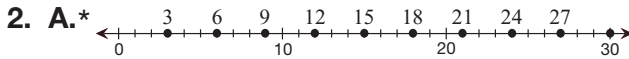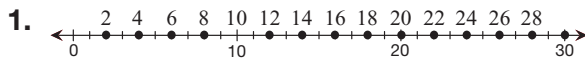
4. Is your number a multiple of 10? How do you know?

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*Answers and/or discussion are included in the lesson.

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How Many Rectangles with 24 Tiles? Questions 1–5 (SAB p. 41)

1.* How Many Rectangles with 24 Tiles?

Number of Rows	Number in Each Row	Division Sentence	Factors
1	24	24 ÷ 1 = 24	1, 24
2	12	24 ÷ 2 = 12	2, 12
3	8	24 ÷ 3 = 8	3, 8
4	6	24 ÷ 4 = 6	4, 6
6	4	24 ÷ 6 = 4	6, 4
8	3	24 ÷ 8 = 3	8, 3
12	2	24 ÷ 12 = 2	12, 2
24	1	24 ÷ 24 = 1	24, 1

Explanations will vary for 2–4. One possible response is given for each.

2. No. You do not hit 24 if you skip count by 5s.

3. Yes. You can make a rectangle with 3 rows and 24 tiles. There will be 8 tiles in each row.

4. No. $24 \div 9 = 2.666\ldots$

5. 1, 2, 3, 4, 6, 8, 12, 24

How Many Rectangles with _____ Tiles? Questions 1–4 (SAB p. 42)

1–4. Responses will vary depending on number given by the teacher.

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Factors and Multiples on the Number Line (SAB p. 43)

Questions 1–3

1.

2 4 6 8 10 12 14 16 18 20 22 24 26 28

2. A.*

3 6 9 12 15 18 21 24 27

B.* All of them. They are divisible by 3.

3. A.

5 10 15 20 25 30
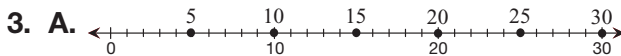
B. Yes, they are all divisible by 5.

How Many Rectangles with 30 Tiles?
Questions 1–5 (SAB p. 45)

1.

How Many Rectangles with 30 Tiles?

Number of Rows	Number in Each Row	Division Sentence	Factors
1	30	30 ÷ 1 = 30	1, 30
2	15	30 ÷ 2 = 15	2, 15
3	10	30 ÷ 3 = 10	3, 10
5	6	30 ÷ 5 = 6	5, 6
6	5	30 ÷ 6 = 5	6, 5
10	3	30 ÷ 10 = 3	10, 3
15	2	30 ÷ 15 = 2	15, 2
30	1	30 ÷ 30 = 1	30, 1

Explanations will vary for 2–4. One possible response is given for each.

2. Yes. You can make a rectangle with 2 rows and 30 tiles.

3. Yes. You hit 30 if you skip count by 3.

4. No. 30 ÷ 4 = 7.5, not a whole number.

5. 1, 2, 3, 5, 6, 10, 15, 30

Name _____ Date _____

Factors and Multiples on the Number Line

1. Skip count to name the multiples of 2 up to 30. Mark the multiples of 2 on this number line. The first 2 are done for you.

0 2 4 10 20 30

2. **A.** Skip count to name the multiples of 3 up to 30. Mark the multiples of 3 on this number line.

0 10 20 30

B. Which of the numbers you marked have 3 as a factor? How do you know?

3. **A.** Mark the multiples of 5 on this number line.

0 10 20 30

B. Is 5 a factor of all the numbers you marked? How do you know?

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Name _____ Date _____

How Many Rectangles with 30 Tiles?
Homework

1. Fill in this table and list all the rectangles possible with 30 tiles. You may use square-inch tiles to help you. The first line is done for you.

Number of Rows	Number in Each Row	Division Sentence	Factors
1	30	30 ÷ 1 = 30	1, 30

2. Is 30 a multiple of 2? How do you know?

3. Is 3 a factor of 30? How do you know?

4. Is 30 a multiple of 4? How do you know?

5. List all the factors of 30.

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***Answers and/or discussion are included in the lesson.**