Divisibility Rules

1. Which of these numbers is 23 640 divisible by? How do you know?
   1. 2 b. 3 c. 4 d. 5 e. 6 f. 8 g. 9 h. 10
2. Draw a Venn Diagram with 2 loops. Label one 6 and the other 9. Sort the following numbers into the diagram:

330

639

5598

10217

2295

858

187

12006

1. You have 24 cereal bars. You must share them equally with everyone in the classroom. How many bars will everyone get?
   1. There are 12 people in the class
   2. There are 6 people in the class
   3. There is no one in the class
   4. Using your answer to part c, why can’t a number be divided by 0?

Algebra

1. Evaluate each expression by replacing x with 3
   1. x + 5
   2. x – 1
   3. 3x
   4. 2x + 6
   5. 12 ÷ x
2. Jason works at a local fish and chips restaurant. He earns $7/h.
   1. Write an expression for his earning
   2. Jason needs $100 to buy new sports equipment. He worked 10 hours. How many more hours does he need to work?

Relationships in Patterns

1. Write the relation for the term

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Term # | 1 | 2 | 3 | 4 | 5 | 6 |
| Term | 6 | 12 | 18 | 24 | 30 | 36 |

1. Write the relation for the term

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Term # | 1 | 2 | 3 | 4 | 5 | 6 |
| Term | 5 | 6 | 7 | 8 | 9 | 10 |

1. Dave pays to practice in a music studio. He pays $12 each month, plus $2 for each hour he uses it.
   1. Write the relation for the total cost for one month, in dollars, when Dave practices for *t* hours
   2. How much will Dave pay to practice 10 hours in one month?
   3. How does the relation change if the cost per hour doubles?