

1

Here is a small multiplication table.

What patterns can you find?

×	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

ANSWER: Sample: You can skip-count across rows and down columns.

COMMENTS & EXTENSIONS: This is an endlessly rich task that can be visited again and again. One small part of pattern searching is to closely examine blocks of numbers, such as

		2	3	4
3	6	4	6	8
4	8	6	9	12

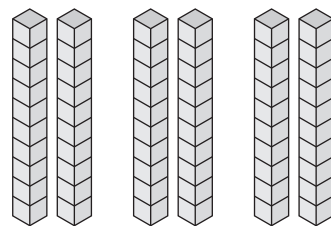


What patterns can you find?

Try This

3 space aliens collected 20 moon rocks each. How many moon rocks did the aliens collect in all?

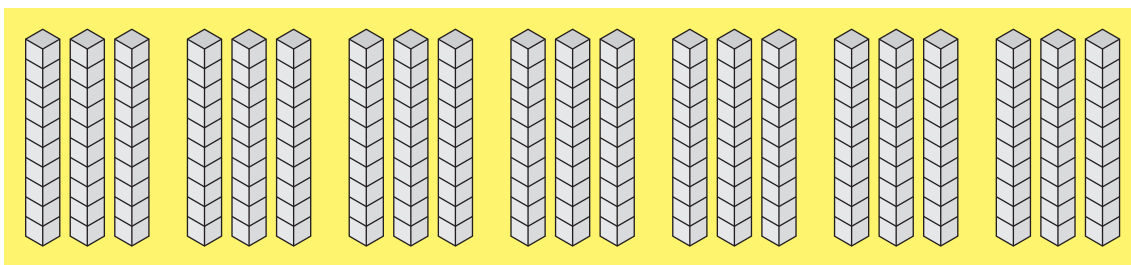
- Use Base Ten Blocks to model the problem.
- Sketch your model.
- Use the model to complete the problem.



3 groups of 20
3 groups of 2 tens
6 tens = 60 moon rocks

Students may draw shorthand representations of rods.

1. There were 7 students. Each student needed 30 pieces of paper. How many pieces of paper were needed?

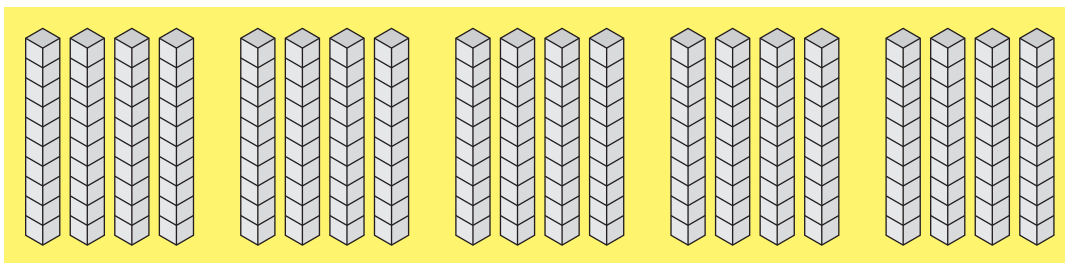


7 groups of 30

7 groups of 3 tens

21 tens = 210 pieces of paper

2. Franklin planted 5 rows of tomato plants. Each row had 40 plants. How many tomato plants were in the garden?



5 groups of 40

5 groups of 4 tens

20 tens = 200 tomato plants

Solve the problem.

3. $4 \times 90 = ?$

4 groups of 90

4 groups of 9 tens

36 tens = 360

4. In the spring, students participated in field day. Team members earned points as they ran through an obstacle course. Determine the total number of points earned for each team.

Field Day Obstacle Course Results			
Team	Number of players who completed the course	Points scored by each player	Total points scored
Blue Team	8	10	80
Red Team	7	40	280
Green Team	6	20	120
Yellow Team	2	50	100

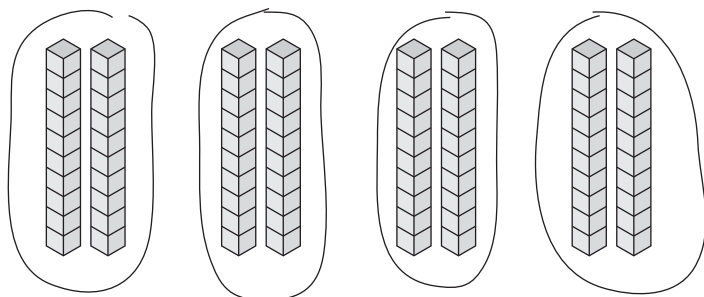
Which team gathered the most points? Red Team

Explain how you know.

Explanations will vary.

Use Base Ten Blocks to build the model. Use the model to solve the problem.

1. Felicia planted 4 rows of strawberry plants in her garden. She put 20 plants in each row. How many strawberry plants does Felicia have in her garden?

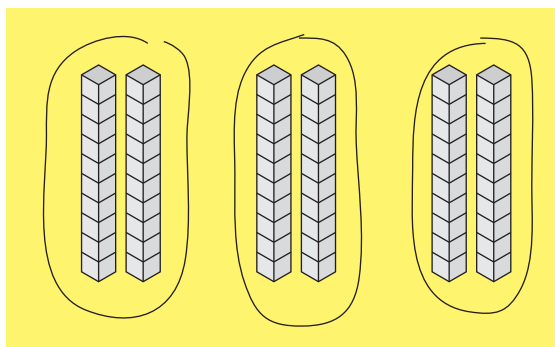


$$\begin{array}{rcl}
 \underline{4} & \text{groups of} & \underline{20} \\
 \underline{4} & \text{groups of} & \underline{2} \text{ tens} \\
 \underline{8} \text{ tens} & = & \underline{80} \text{ strawberry plants}
 \end{array}$$

Use Base Ten Blocks to build a model for the problem. Sketch your model. Use your model to solve the problem.

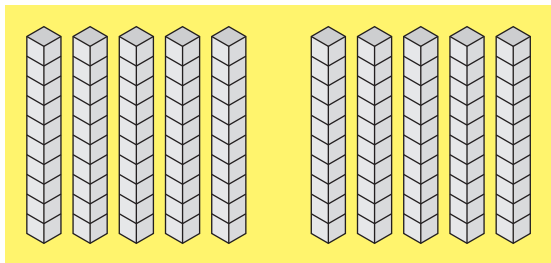
Students may draw shorthand representations of rods.

2. Three groups of 20 students visited the zoo. How many students visited the zoo?



$$\begin{array}{rcl}
 \underline{3} & \text{groups of} & \underline{20} \\
 \underline{3} & \text{groups of} & \underline{2} \text{ tens} \\
 \underline{6} \text{ tens} & = & \underline{60} \text{ students}
 \end{array}$$

3. Two crayon boxes each have 50 crayons. How many crayons are there in all?



$$\begin{array}{rcl} 2 & \text{groups of} & 50 \\ 2 & \text{groups of} & 5 \text{ tens} \\ 10 & \text{tens} = & 100 \text{ crayons} \end{array}$$

Solve the problem.

4. A mail carrier has 7 bags of mail. Each bag has 40 pieces of mail. How many pieces of mail does the mail carrier have in all?

$$\begin{array}{rcl} 7 & \text{groups of} & 40 \\ 7 & \text{groups of} & 4 \text{ tens} \\ 28 & \text{tens} = & 280 \text{ pieces of mail} \end{array}$$

5. $4 \times 60 = ?$

$$\begin{array}{rcl} 4 & \text{groups of} & 60 \\ 4 & \text{groups of} & 6 \text{ tens} \\ 24 & \text{tens} = & 240 \end{array}$$

6. $4 \times 30 = ?$

$$\begin{array}{rcl} 4 & \text{groups of} & 30 \\ 4 & \text{groups of} & 3 \text{ tens} \\ 12 & \text{tens} = & 120 \end{array}$$