

$$-12 + (1 + (-5)) =$$

$$(-15 \div 5) + (-12 \div 3) =$$

$$(-5 + 11) \times -5 =$$

$$(-5 + 12)^2 =$$

$$(-2)^2 \div (10 - 8) =$$

$$12 \times (-2) \div 2^3 =$$

$$-3 - (-3) - (5)^2 =$$

$$((-3)^2 \times 3) \div -9 =$$

2 True or False?

a $\frac{1}{4} \times 9 = 2\frac{1}{4}$ **T F**

b $\frac{3}{5}$ of 25 = 15 **T F**

c $\frac{2}{5}$ of 15 = $5\frac{2}{5}$ **T F**

d $18 \times \frac{1}{5} = \frac{5}{18}$ **T F**

e $\frac{2}{6} \times 24 = 14$ **T F**

f $17 \times \frac{1}{3} = \frac{17}{3}$ **T F**

- 3** Pete rode his dirt bike $\frac{2}{3}$ of the 150-mile course. How many miles did Pete ride?
Show your work.

- 4** Kim says that multiplying $\frac{1}{4} \times 12$ is the same as dividing 12 by 4. Do you agree with Kim? Explain your answer.

934.705		
100.550		

6 Evaluate each of the following.

a $6 \times (5 \times 12) = \underline{\hspace{2cm}}$

b $(18 \times 13) + (2 \times 13) = \underline{\hspace{2cm}}$

c $(75 \div 3) \times 10 = \underline{\hspace{2cm}}$

d $(117 \times 4) - (7 \times 4) = \underline{\hspace{2cm}}$

7 Six friends had lunch together and decided to split the bill evenly.

a If the bill was \$48.60, what was each person's share? Show your work.

b After tax and tip, the bill totaled \$63.00. What was each person's share? Show your work.

8 **CHALLENGE** Vivian loves to paint in the evenings after school. She is working on three paintings. She needs 4 brushes, 3 canvases, and 12 small tubes of paint. Brushes cost \$2.75 each, canvases cost \$5.00 each, and tubes of paint cost \$1.80 each.

$$\begin{array}{r} 37 \\ 13 \overline{) 481} \\ \underline{- 39} \\ 91 \\ \underline{- 91} \\ 0 \end{array}$$

$$\begin{array}{r} 2 \\ 5 \\ 10 \\ 20 \\ 13 \overline{) 481} \\ \underline{-260} \\ 221 \\ \underline{-130} \\ 91 \\ \underline{-65} \\ 26 \\ \underline{-26} \\ 0 \end{array}$$

Number of Groups	1	10	20	5		
Total	13	130	260	65		

1 Fill in the blanks.

a $\frac{1}{4}$ of 36 is _____, so 0.25×36 is _____, so 25×36 is _____,

so 26×36 is _____, and 24×36 is _____.

b $\frac{1}{4}$ of 48 is _____, so $\frac{3}{4}$ of 48 is _____, so 75×48 is _____,

so $76 \times 48 = \underline{\hspace{2cm}}$, and 74×48 is

ex

$$\begin{array}{r}
 15 \overline{) 240} \\
 \underline{-150} \\
 90 \\
 \underline{-75} \\
 15 \\
 \underline{-15} \\
 0
 \end{array}$$

Number of Groups	1	10	20	5		
Total	15	150	300	75		



$$10 + 5 + 1 = 16$$

so, $240 \div 15 = 16$

a

$$16 \overline{) 272}$$

Number of Groups	1	10	20	5			
Total	16						

b

$$12 \overline{) 216}$$

Number of Groups	1	10	20	5			
Total	12						

The cost to make 19 bracelets is _____.

b Use the ratio table to show your strategy for finding how many bracelets Maria can make for \$126.25.

Number of Bracelets	1								
Cost	\$1.25								

Maria can make _____ bracelets for \$126.25.

4 Solve the problems below. Use the standard algorithm for one problem. Use any strategies for the other problems. Show your work. Explain your choice of strategy.

$$\begin{array}{r} 26 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ \times 36 \\ \hline \end{array}$$

Why did you choose this strategy?	Why did you choose this strategy?	Why did you choose this strategy?

$$\begin{array}{r}
 \square 2 \\
 + \square 38 \square \\
 \hline
 1, \square 7 \square
 \end{array}$$

$$\begin{array}{r}
 \square 06 \\
 + 15, \square \square 0 \\
 \hline
 \square \square \square \square
 \end{array}$$

$$\begin{array}{r}
 4,3 \square 4 \\
 + \square \square, 540 \\
 \hline
 4 \square, 8 \square 4
 \end{array}$$

$\times$	$\angle$	γ	θ	γ	$/$	20	40	50
40	80							

2 Complete the following division tables.

$\div$	1,200	900	60	210	1,500	1,800	270	2,400
30	40							

3 Solve these multiplication problems using the standard algorithm.

$$\begin{array}{r}
 84 \\
 \times 36 \\
 \hline
 504 \\
 + 2,520 \\
 \hline
 3,024
 \end{array}$$

$$\begin{array}{r}
 58 \\
 \times 27 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 451 \\
 \times 32 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 256 \\
 \times 33 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 177 \\
 \times 49 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 305 \\
 \times 64 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 573 \\
 \times 26 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 837 \\
 \times 86 \\
 \hline
 \end{array}$$

Strawberry Kisses	216
Pineapple Sweets	193

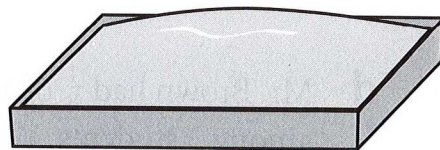
- a** Which bag of candies should she buy? Show all of your work.

Hint: Can you remember a divisibility rule to help?

- b** How many candies will each cousin get? Show all your work.

- a** (Two, three, four) dinner guests shared ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{4}$) of a pan of cornbread.
What fraction of the pan of cornbread did each guest get?

Each guest got _____ pan of cornbread.



- b** Five cousins shared ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{3}{4}$) of a birthday cake. What fraction of the cake did each cousin get?

Expression: _____

There was _____ a cup on each salad.



- d** Mr. Brown had $\frac{1}{8}$ of a pack of paper. He divided the pack equally among equally among 3 students. What fraction of the pack of paper did each student get?

Expression: _____

Each student got _____ sheets of paper.

- 2** Choose one of the expressions below and circle your choice. Write a story problem about the expression you circled. Then solve your own problem.

$$\frac{1}{2} \div 2 =$$

$$\frac{1}{2} \div 6 =$$

$$\frac{1}{3} \div 4 =$$

$$\frac{1}{8} \div 4 =$$

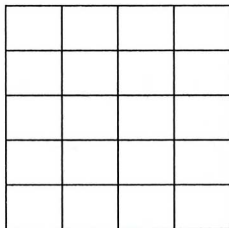
My story problem is:

My work:

$$7\frac{2}{3} - 5\frac{3}{4} = \underline{\hspace{2cm}}$$

- 3** Using the grid below, create an array to model and solve this problem.

$$\frac{2}{5} \times \frac{3}{4} = \underline{\hspace{2cm}}$$



- 4** Add. Show your work.

$$\begin{array}{r} 8\frac{5}{6} \\ + 3\frac{2}{3} \\ \hline \end{array}$$

- 5** Write a story problem to represent the expression below. Then solve your problem. Show your work with labeled models, numbers, or words, and write the answer on the line provided.

$$\frac{1}{2} \div 3 = \underline{\hspace{2cm}} \quad \text{My Story Problem: } \underline{\hspace{10cm}}$$

ex $\frac{8}{3} + \frac{9}{12}$

The sum is more than 3.

$$\frac{32}{12} + \frac{9}{12} = \frac{41}{12} \text{ and } \frac{41}{12} = 3\frac{5}{12}$$

$$3\frac{5}{12}$$

1 $\frac{4}{6} + \frac{8}{12}$

2 $\frac{12}{8} + \frac{3}{4}$

3 $\frac{3}{8} + \frac{8}{12}$

- 2** Tommy picked 2 baskets full of apples. One basket weighed 18.63 kilograms. The other basket weighed 9.97 kilograms. How much more did the first basket weigh?
- 3** Kaya filled $3\frac{1}{4}$ baskets with apples. On her way home, the baskets spilled and she lost $2\frac{1}{3}$ baskets of apples. What portion of the apples did not spill?

c $57 \times 1000 = \underline{\hspace{2cm}}$

d $57 \times 10,000 = \underline{\hspace{2cm}}$

e $57 \times \underline{\hspace{2cm}} = 5,700,000$

2 What do you notice about the problems above? Explain any patterns you see.

3 Fill in the blanks.

a $570 \div 10 = \underline{\hspace{2cm}}$

b $570 \div 100 = \underline{\hspace{2cm}}$

c $570 \div 1,000 = \underline{\hspace{2cm}}$

d $570 \div 10,000 = \underline{\hspace{2cm}}$

e $570 \div \underline{\hspace{2cm}} = 0.0057$

4 What do you notice about the problems above? Explain any patterns you see.

- 2** Write an ordered pair to represent each cube arrangement. Use the arrangement number for the first number in the pair, and the number of cubes it takes to make the arrangement for the second number in the pair. So, for example, arrangement 1 would be written as (1,2), and arrangement 2 would be written as (2,6).

Arrangement 1

Arrangement 2

Arrangement 3

Arrangement 4

Arrangement 5

(____, ____)

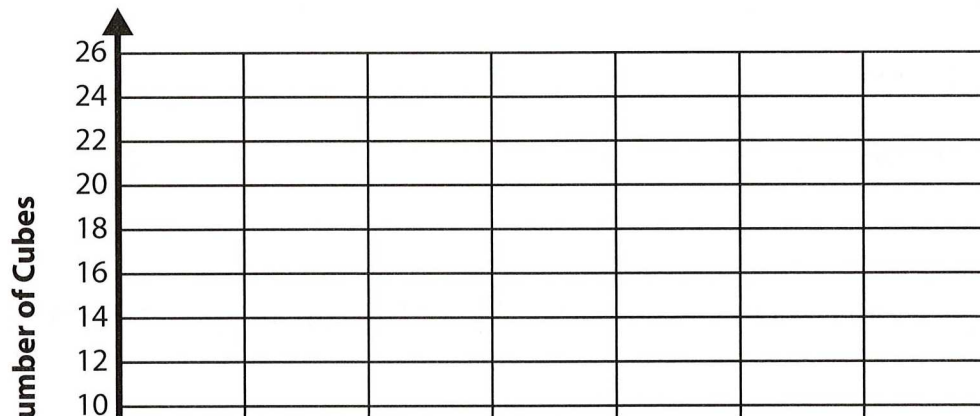
(____, ____)

(____, ____)

(____, ____)

(____, ____)

- 3** Graph and label each of the ordered pairs.



(5,2) ④

(4,2) ⑤

(4,3) ⑥

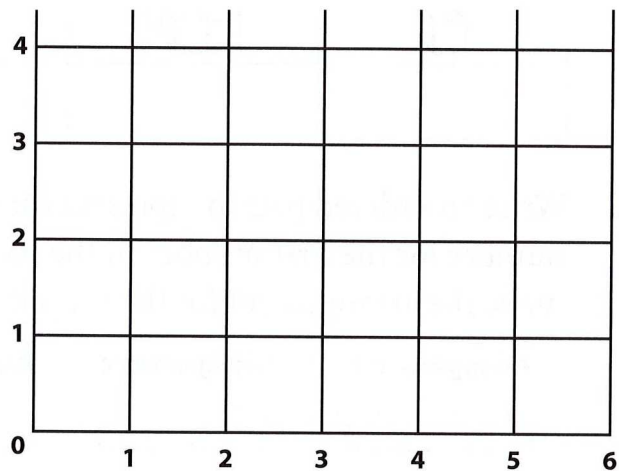
(3,3) ⑦

(3,4) ⑧

(2,4) ⑨

(2,5) ⑩

(1,5) ⑪



b (1,2) ①

(2,1) ②

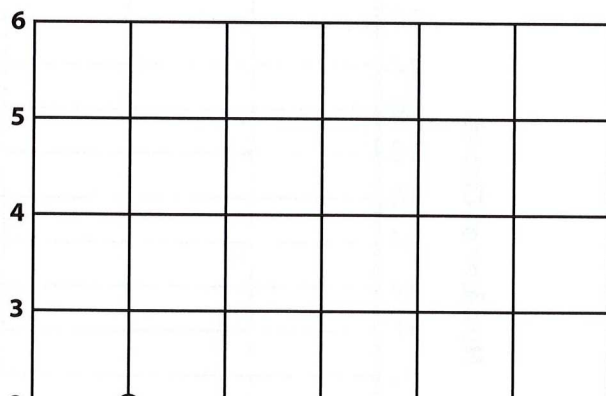
(3,1) ③

(4,2) ④

(3,2) ⑤

(3,5) ⑥

(4,3) ⑦



- 2** Write an ordered pair to represent each cube arrangement. Use the arrangement number for the first number in the pair, and use the number of cubes it takes to make the arrangement for the second number in the pair.

Arrangement 1

Arrangement 2

Arrangement 3

Arrangement 4

Arrangement 5

(____, ____)

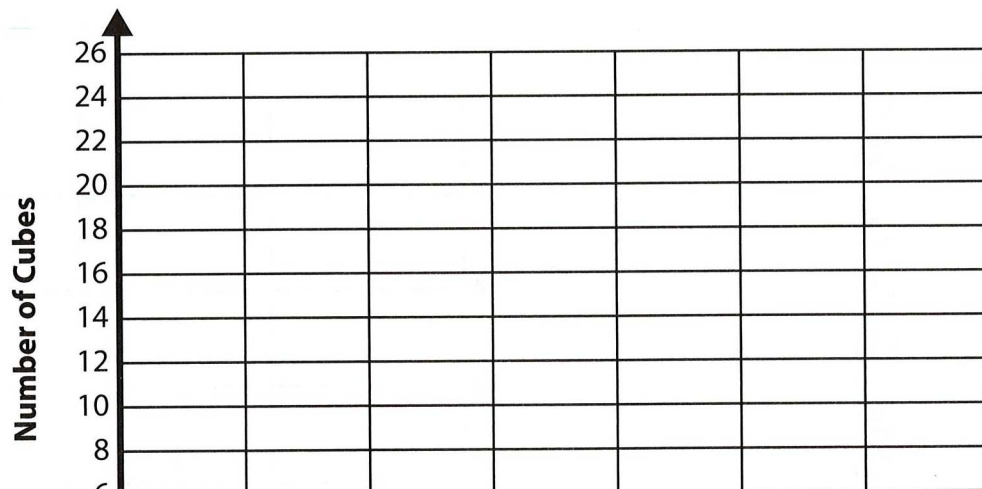
(____, ____)

(____, ____)

(____, ____)

(____, ____)

- 3** Graph and label each of the ordered pairs.

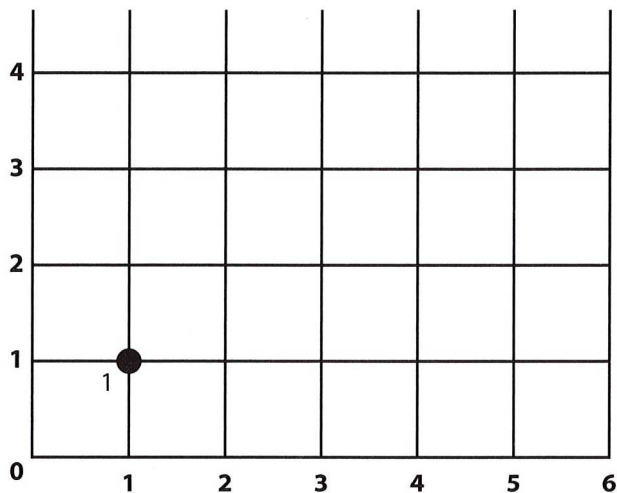


(5, 1) ③

(1, 3) ④

(5, 3) ⑤

(1, 1) ⑥



2 Make up your own dot-to-dot picture on the grid below. Use at least 12 points for your picture. List the coordinates for your picture in order.

(____, ____)

①

(____, ____)

②

(____, ____)

③

(____, ____)

④

(____, ____)

⑤

(____, ____)

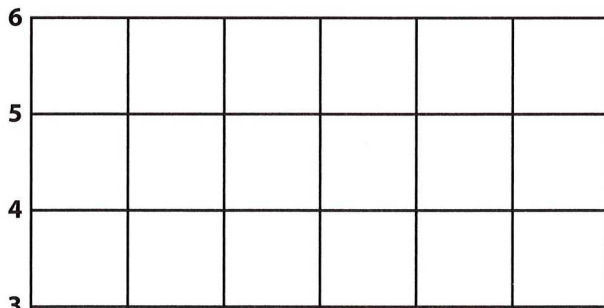
⑥

(____, ____)

⑦

(____, ____)

⑧



- 5** It takes exactly 196 tiles to build both the water and the border for a certain arrangement in this sequence. Which arrangement is it? Use numbers, words, or labeled sketches to explain how you got your answer.

Company 1 offered to pay Anthony \$1 on the first day and double the amount each day (\$1 the first day, \$2 the next day, \$4 the third day, \$8 the fourth day, and so on).

Company 2 offered to pay Anthony \$75 every day.

Which job should Anthony accept if he wants to reach his goal of earning \$1,000 as quickly as possible?

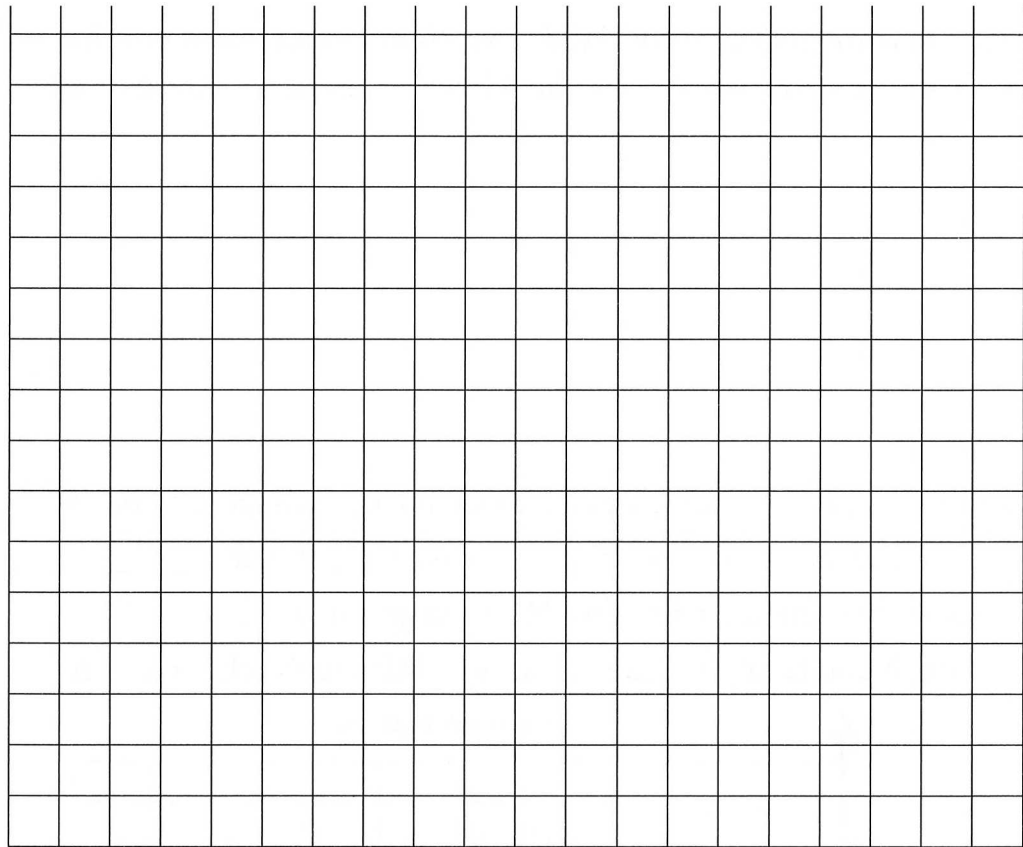


- 1 On the next page, fill in the table for each company's payment plan. You can stop as soon as the total amount of money reaches or goes over \$1,000 for a plan, and then do the other one.
- 2 On the next page, graph the running totals for each day. Graph each plan in a different color, and mark the key at the bottom of the sheet to show which is which.
- 3 Which company's plan turned out to be best? Why?

3	\$4		4	\$75	
4	\$8		4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		
16			16		
17			17		

Total Amount of Money Earned (Dollars)

800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0



Days

Key

- 3** Compare Miranda's patterns. Write two observations about how her number patterns are alike, and two observations about how her number patterns are different.

- 4** Miranda graphed one of her patterns on the coordinate grid below.

- Did Miranda graph her first or her second pattern? _____
- Label the ordered pairs that Miranda graphed.
- Graph and label the ordered pairs in Miranda's other pattern.

