Name

# Selection 

## of

Problems \#5

Label the dots.


What is the greatest odd number in this picture? $\qquad$
What is the greatest multiple of 5 in this picture? $\qquad$

Fum a secret number.

## Clue 1

Fum can be shown on these Minicomputer boards by removing exactly one checker.


Fum could be $\qquad$ , $\qquad$ , $\qquad$ , or $\qquad$ .

Clue 2


Who is Fum? $\qquad$

Put a single digit in each box to make the calculations correct.


Label the dots.


Put each number on the display of a calculator using just these keys:

$$
\begin{array}{llllll}
5 & 6 & 8 & 9 & + & - \\
\hline & \boxed{ } & \div & =
\end{array}
$$

List the keys in the order you use them. You may use a key more than once.

It costs $1 ¢$ each time you press a key. Try to spend less than the amount shown for each number.

# 7 [9\&] 

44 [104]

Label the dots and fill in the box for the red arrow.


## Circle each shape that could be folded into a cube.



You should have circled four shapes.

The red label is one of these:


Multiples of 3
Multiples of 4
Less than 20

## Greater than 20

Positive divisors of 24
Positive divisors of 30

The blue label is one of these:

| Multiples of 2 |
| :---: |
| Multiples of 3 |
| Multiples of 4 |
| Less than 20 |
| Greater than 20 |
| Positive divisors of 24 |
| Positive divisors of 30 |

Label the strings.


This square measures 9 cm on an edge. Using a ruler, carefully divide this square into nine smaller squares all the same size.


Fill in the blanks.
Each small square is what fraction of the large square?
Each small square has sides of length $\qquad$ cm each.

The area of each small square is ___ $\mathrm{cm}^{2}$.
The area of the large square is $\qquad$

Label the dots and fill in the boxes for the red arrows.


Label the dots on each number line.


Label each dot in the string picture with one of these numbers.

$$
\begin{array}{llllllll}
0 & 1 & 5 & 7 & \text { II } & 22 & 28 & 77
\end{array}
$$



Are there any numbers that belong in the middle region?

Fill in the boxes.

$$
\begin{aligned}
& 21 \div 3=\frac{21}{3}=7 \\
& 22 \div 3=\frac{22}{3}=\square \\
& 23 \div 3=\frac{23}{3}=\square \\
& 24 \div 3=\frac{24}{3}=\square \\
& 25 \div 3=\frac{25}{3}=\square \\
& 26 \div 3=\frac{26}{3}=8 \frac{2}{3} \\
& 27 \div 3=\frac{27}{3}=\square \\
& 28 \div 3=\frac{28}{3}=\square \\
& 32 \div 3=\frac{32}{3}=\square
\end{aligned}
$$

The dots on the grid represent purchases/returns of apples and peaches.

Label the dots. One is done for you.


Draw and label dots for these purchases/returns.

$$
\begin{array}{ll}
\widehat{4} a+5 p & 4.5 a+\widehat{3} p \\
0 a+\widehat{3} p & 7.5 a+3.5 p
\end{array}
$$

## Pro is a secret number.

Clue 1
Pro is in this arrow picture.


Clue 2


Who is Pro?

Shade three-eighths of Sara's cake.


Make Sara's cuts on Amelia's cake.
Make Amelia's cuts on Sara's cake.
Now use the pictures to solve this problem.
$\frac{3}{8}+\frac{5}{6}=$

Put a single digit in each box to make the calculations correct.


In these six arrow roads, label each blue arrow $\boldsymbol{t}$ some prime number. The first road is done for you. Many solutions are possible.


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Loy is a secret number.
Clue 1

| The blue arrow <br> could be for: | The red arrow <br> could be for: |
| :--- | :--- |
| $5 \times$ <br> $\div 2$ <br> +7 | 5 <br> $\div 2$ <br> +7 |



Loy could be $\qquad$ , $\qquad$ ——, $\qquad$ , $\qquad$ , $\qquad$ ,
$\qquad$ , or $\qquad$ .

Clue 2
Loy is in this arrow picture. Label the dots.


Who is Loy? $\qquad$

Dots on this grid represent purchases of apples and peaches.


1. Mr. Plum bought a total of 9 kg of apples and peaches. List four purchases he could have made.
$6.5 \mathrm{a}+\ldots \quad \mathrm{p}$
$a+4.36 p$
Draw red dots for these purchases. Draw a red line segment to show all 9 kg purchases.
2. Ms. Blossom bought two more kilograms of apples than peaches. List four purchases she could have made.

$$
8.2 a+\_\quad p \quad a+8.7 p
$$

Draw blue dots for these purchases. Draw a blue line segment connecting these dots.

Fill in the boxes for the arrows.


Multiply.

$$
\begin{array}{ll}
\frac{2}{3} \times \frac{2}{5}=\square & \frac{5}{6} \times \frac{3}{8}=\square \\
\frac{4}{9} \times \frac{1}{3}=\square & \frac{4}{7} \times \frac{1}{2}=\square
\end{array}
$$

Locate these numbers on the number line.
$\frac{1}{2}$
$\frac{1}{8}$
$\frac{7}{8}$
$\frac{1}{4}$
$\frac{3}{4}$
$\frac{5}{4}$
$\frac{5}{8}+\frac{7}{8}$
$\frac{1}{2}+\frac{1}{8}$


Draw all of the missing red arrows.


$$
\frac{1}{2}+\frac{1}{8} \quad \frac{5}{8}+\frac{7}{8}
$$

Pair the tags.


$$
+13
$$

$3 x$

$+13.5$

$$
+8.5
$$

$$
+28
$$

$\square$


$$
+2.5
$$

$$
4 x
$$

Three corners of a parallelogram are at $(\hat{7}, \widehat{1}),(\widehat{5}, 3)$, and $(\hat{1}, \widehat{1})$. Draw dots at these three corners. Where could the fourth corner be? Several answers are possible.
Then draw one of these parallelograms.


Three corners of a parallelogram are at ( $\widehat{2}, \widehat{1}),(2,3)$, and $(6,1)$. Draw dots at these three corners. Where could the fourth corner be? Several answers are possible. Then draw one of these parallelograms.

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What fraction of each shape is red?


Red: $\qquad$


Red: $\qquad$


Red: $\qquad$


Red:


Pic and Pac are secret whole numbers. They are in this arrow picture and in this string picture.

is less than


Who is Pic? $\qquad$

Who is Pac? $\qquad$

Circle the shape that could be folded into this cube:


Circle the shape that could be folded into this cube:


Put each number on the Minicomputer using exactly the checkers to the left of the boards.
(10) (5)

(5) (4)

$=10$
(3) (6)

$=3$
(6) 7

$=4$
(9) (4)

$=5$
(8) (8)

$=8$

There are 22 students in this class.
12 of the students in the class are girls.
One-third of the girls in the class do not wear glasses.
One-half of the students in the class who wear glasses are boys.


How many of the girls in the class wear glasses? $\qquad$
How many of the boys in the class do not wear glasses? $\qquad$ How many of the students in the class wear glasses? $\qquad$

Vip is a secret number.
Clue 1


Clue 2
Vip can be put on these Minicomputer boards with exactly two regular checkers.


Vip could be $\qquad$
$\qquad$
$\qquad$
$\qquad$ —, $\qquad$
$\qquad$ , $\qquad$
$\qquad$ , or $\qquad$ .

Clue 3


Who is Vip? $\qquad$

Label the dots.


