

Students need to be fluent with addition and subtraction strategies. They need to understand place value and different ways to use numbers when doing computation. They need to be able to do (and explain) at least 2 strategies to be considered proficient.

## Addition Strategies: $394 + 258 =$ \_\_\_\_\_

### Break Apart one number and add it in parts:

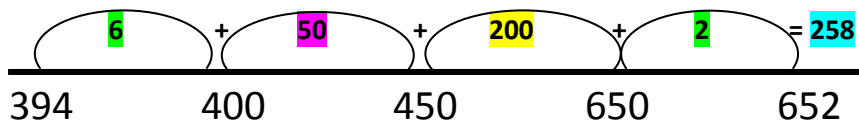
$$394 + 258 = \underline{\hspace{2cm}}$$

$$394 + 8 = 402$$

$$402 + 50 = 452$$

$$452 + 200 = 652$$

$$394 + 258 = \underline{\hspace{2cm}}$$



Use landmark or friendly numbers.

### Adding by Place Value:

$$394 + 258 = \underline{\hspace{2cm}}$$

394

+258



12 (= 4+8 ones)

140 (=90+50 tens)

500 (=300+200 hundreds)

652

#### Expanded Notation

$$\begin{array}{r} +100 \quad +10 \\ 300 + 90 + 4 \\ \underline{200 + 50 + 8} \\ 600 + 50 + 2 \end{array}$$

#### Traditional algorithm

$$\begin{array}{r} 100 \ 10 \\ 394 \\ +258 \\ \hline 652 \end{array}$$

# Subtraction Strategies: $873 - 378 =$ \_\_\_\_\_

## Adding up

$$378 + \underline{\hspace{2cm}} = 873$$

$$\begin{array}{ccccccc} & \text{2} & + & \text{20} & + & \text{400} & + & \text{73} & = & \text{495} \\ \hline 378 & & & 380 & & 400 & & 800 & & 873 \end{array}$$

Use landmark or friendly numbers.

$$378 + 400 = 778$$

$$778 + 90 = 868$$

$$868 + 5 = 873$$

$$\begin{array}{ccccccc} & \text{400} & + & \text{90} & + & \text{2} & + & \text{3} & = & \text{495} \\ \hline 378 & & & 778 & & 868 & & 870 & & 873 \end{array}$$

## Subtract in parts

$$873 - 378 = \underline{\hspace{2cm}}$$

$$873 - 300 = 573$$

$$573 - 70 = 503$$

$$503 - 8 = 495$$

## Expanded notation

$$\begin{array}{r} 700 + \overset{160}{\cancel{70}} + \overset{13}{\cancel{3}} \\ - 300 + 70 + 8 \\ \hline 400 + 90 + 5 \end{array}$$

Traditional Algorithm

$$\begin{array}{r} 160 \\ 700 \overset{13}{\cancel{70}} \\ \underline{873} \\ - 378 \\ \hline 495 \end{array}$$