

Activity 17 Assessment

Using Mental Math to Calculate Percents

Calculating Percents using Mental Math

Explores number patterns and relationships.

$$\begin{aligned} 100\% \text{ of } 360 &= 360 \\ 50\% \text{ of } 360 &= 180 \\ 25\% \text{ of } 360 &= 90 \\ 12.5\% \text{ of } 360 &= 45 \end{aligned}$$

What patterns do you see?

“I see that the percent is halved each time and when this happens, the product is also halved.”
 (« *Je vois que le pourcentage est réduit d'une moitié chaque fois et lorsque cela se produit, le produit est également réduit d'une moitié.* »)

Uses number patterns and relationships to solve problems.

$$50\% \text{ of } 80 = ?$$

10% is the same as 0.1 and
50% is the same as 0.5.

$$\begin{aligned} \text{So, } 50\% \text{ of } 80 &= 5 \times 0.1 \times 80 \\ &= 5 \times 8 \\ &= 40 \end{aligned}$$

Uses mental math strategies and checks for reasonableness.

$$\begin{aligned} \text{Find } 14\% \text{ of } \$300 \\ 14\% &= 10\% + 5\% - 1\% \\ 10\% \text{ of } \$300 &= \$30 \\ 5\% \text{ of } \$300 &= \$15 \\ 1\% \text{ of } \$300 &= \$3 \\ \text{So, } 14\% \text{ of } \$300 &= \$30 + \$15 - 3 \\ &= \$42 \end{aligned}$$

Fluently calculates percents using a variety of mental math strategies.

$$8\% \text{ of } 260 = ?$$

$$\begin{aligned} 8\% \text{ of } 260 &= (10\% - 2\%) \text{ of } 260 \\ &= 10\% \text{ of } 260 - 2\% \text{ of } 260 \\ &= 26 - 2(2.6) \\ &= 26 - 5.2 \\ &= 20.8 \end{aligned}$$

Observations/Documentation