SKILL 13: Using Mental Math to Find a Percent of a Number

Some fraction, decimal, and percent conversions that are frequently used are shown in the table.

Fraction	Decimal	Percent
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$	$0.33\frac{1}{3}$	$33\frac{1}{3}\%$
$\frac{1}{4}$	0.25	25%
$\frac{1}{5}$	0.2	20%
$\frac{1}{8}$	$0.12\frac{1}{2}$	$12\frac{1}{2}\%$
$\frac{1}{10}$	0.1	10%

You can use these percents to find others.

$3 \times 25\% = 75\%$, so $75\% = 3 \times \frac{1}{4} = \frac{3}{4}$.

Example 1

Find 25% of 28.

Think: $25\% = \frac{1}{4}$. $\frac{1}{4} \times 28 = \frac{28}{4} = 7$, so 25% of 28 = 7.

Example 2

Find 60% of 80.

Think: $10\% \times 80 = \frac{1}{10} \times 80 = 8$. Since 60% is $6 \times 10\%$, multiply the result by 6.

$6 \times 8 = 48$, so 60% of 80 = 48.

Example 3

Find $33\frac{1}{3}\%$ of 240.

Think: $33\frac{1}{3}\% = \frac{1}{3}$. $\frac{1}{3} \times 240 = \frac{240}{3} = 80$, so $33\frac{1}{3}\%$ of 240 = 80.

Guided Practice

Use mental math to find each percent.

1. Find 50% of 300.

Think: $50\% = \frac{1}{2}$. $\frac{1}{2} \times 300 =$ _____, so 50% of 300 = _____.

2. Find $12\frac{1}{2}\%$ of 24.

Think: $12\frac{1}{2}\% = \frac{1}{8}$. $\frac{1}{8} \times 24 =$ _____, so $12\frac{1}{2}\%$ of 24 = _____.

3. Find $33\frac{1}{3}\%$ of 15.

Think: $33\frac{1}{3}\% = \frac{1}{3}$. $\frac{1}{3} \times 15 =$ _____, so $33\frac{1}{3}\%$ of 15 = _____.

4. Find 87% of 10.

Think: 87% of 10 = 10% of 87 = _____.

5. 20% of 45 = _____ **6.** $66\frac{2}{3}\%$ of 90 = _____ **7.** 10% of 53 = _____

8. 75% of 16 = _____ **9.** 100% of 93 = _____ **10.** 44% of 50 = _____