Name _____ Date _____ Class _____

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 = _____

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SKILL 13: Practice

Use mental math to find each percent of 400.

1. 50% _____
2. 25% _____
3. $37\frac{1}{2}\%$ _____
4. 5% _____
5. 1% _____
6. 20% _____
7. 80% _____
8. 30% _____

Use mental math to find each percent.

9. 50% of 420 = _____
10. 75% of 80 _____
11. 10% of 57 _____
12. 83% of 10 = _____
13. $33\frac{1}{3}\%$ of 48 _____
14. 100% of 35 _____
15. $12\frac{1}{2}\%$ of 40 = _____
16. 20% of 500 _____
17. $66\frac{2}{3}\%$ of 120 _____
18. 42% of 50 = _____
19. 50% of 1,800 _____
20. 32% of 25 _____

Solve each problem, using mental math.

21. A 20% down payment is required on the purchase of a new car. What is the amount of the down payment needed to buy a $21,000 car? _____

22. Jason has a 25% discount coupon for an amusement park ticket. How much will he save on a ticket that normally costs $32? _____

23. Marvin earned $800 one summer. He saved 75% of his earnings. How much money did Marvin save? _____

24. Eighty percent of the 300 students at Taft School ride the school bus. How many students is this? _____

25. Mabelle's food bill at a restaurant was $20. She decided to leave a 15% tip. How much tip did she leave? _____

26. Find 40% of 30. *Skill 13*

A 6 C 75
B 12 D 120

27. Write $\frac{11}{25}$ as a percent. *Skill 11*

F 44 H 44%
G 0.44% J 11%