



Name \_\_\_\_\_ Date \_\_\_\_\_

# Estimating with Percents (pages 337–339)

When a problem asks for “about how many,” the word *about* tells you that an exact answer is not needed. You can estimate the answer.

<b>Common Equivalents for Percents and Fractions</b>	Memorizing these common equivalents will help you estimate. Often you can think of money to help you remember these. For example: A quarter is \$0.25 which is $\frac{1}{4}$ of a dollar.
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$20\% = \frac{1}{5}$	$25\% = \frac{1}{4}$	$12\frac{1}{2}\% = \frac{1}{8}$	$16\frac{2}{3}\% = \frac{1}{6}$
$40\% = \frac{2}{5}$	$50\% = \frac{1}{2}$	$37\frac{1}{2}\% = \frac{3}{8}$	$33\frac{1}{3}\% = \frac{1}{3}$
$60\% = \frac{3}{5}$	$75\% = \frac{3}{4}$	$62\frac{1}{2}\% = \frac{5}{8}$	$66\frac{2}{3}\% = \frac{2}{3}$
$80\% = \frac{4}{5}$	$100\% = 1$	$87\frac{1}{2}\% = \frac{7}{8}$	$83\frac{1}{3}\% = \frac{5}{6}$

## EXAMPLES

**A** Estimate 61% of 35.

*The table shows that 60% is  $\frac{3}{5}$ . Multiply to estimate.*

$\frac{3}{5} \times 35 = 21$ . So 61% of 35 is about 21.

**B** Estimate 9% of 415.

*10% is  $\frac{1}{10}$ . Multiply to estimate.*

$\frac{1}{10} \times 415 = 41.5$ . So 9% of 415 is about 41.

## Try These Together

1. Estimate 88% of 64.

*HINT: Multiply to find  $\frac{7}{8}$  of 64.*

2. Estimate 17% of 24.

*HINT: Multiply to find  $\frac{1}{6}$  of 24.*

## PRACTICE

**Estimate each percent.**

- |                                  |                          |               |               |
|----------------------------------|--------------------------|---------------|---------------|
| 3. 26% of 40                     | 4. 18% of 10             | 5. 48% of 30  | 6. 60% of 21  |
| 7. 73% of 104                    | 8. 80% of 51             | 9. 101% of 41 | 10. 22% of 80 |
| 11. 34% of 9                     | 12. 11% of 80            | 13. 58% of 25 | 14. 19% of 45 |
| 15. About how much is 48% of 12? | 16. Estimate 24% of 200. |               |               |
17. **School** There are 23 students in Donovan’s class. About 25% of his classmates are older than him. Estimate how many of Donovan’s classmates are older than him.



18. **Standardized Test Practice** Tyler’s family gets a busy signal 21% of the time they try to log on to the Internet. If they tried to log on 10 times in one day, about how many times would they get a busy signal?

- A** 2                      **B** 3                      **C** 4                      **D** 5

Answers: Sample answers are given. 1. 56 2. 4 3. 10 4. 2 5. 15 6. 12 7. 75 8. 40 9. 41 10. 16 11. 3 12. 8 13. 15 14. 9 15. 6 16. 50 17. 6 18. A