PERCENT AND ESTIMATION

100% OF 500 = 500 ← $\frac{500}{1} = 500$

10% OF 500 = 50 ← 10% IS THE SAME AS $\frac{1}{10}$ → $\frac{500}{10} = 50$

1% OF 500 = 5 ← 1% IS THE SAME AS $\frac{1}{100}$ → $\frac{500}{100} = 5$

50% OF 80 = 40 ← 50% IS THE SAME AS $\frac{1}{2}$ → $\frac{80}{2} = 40$

25% OF 80 = 20 ← 25% IS THE SAME AS $\frac{1}{4}$ → $\frac{80}{4} = 20$

10% OF 60 = 6

12% OF 60 =

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Lesson 2 Reteach

Percent and Estimation

To estimate the percent of a number, you can use a fraction or a multiple of 10% or 1%.

Example 1

Estimate 77% of 800.

77% is about 75% or $\frac{3}{4}$.

$77\% \text{ of } 800 \approx \frac{3}{4} \cdot 800$ Use $\frac{3}{4}$ to estimate.

≈ 600 Multiply.

So, 77% of 800 is about 600.

77% ≈ 75%

75% of 800

50% of 800 = 400

+ 25% of 800 = 200

600

Example 2

Estimate 137% of 50.

137% is more than 100%, so 137% of 50 is greater than 50. 137% ≈ 140%.

$140\% \text{ of } 50 = (100\% \text{ of } 50) + (40\% \text{ of } 50)$ 140% = 100% + 40%

$= (1 \cdot 50) + \left(\frac{2}{5} \cdot 50\right)$ 100% = 1 and 40% = $\frac{2}{5}$

$= 50 + 20 \text{ or } 70$ Simplify.

So, 137% of 50 is about 70.

100% of 50 = 50

10% of 50 = 5

40% of 50 = 20

70

Example 3

Estimate 0.5% of 692.

0.5% is half of 1%. 692 is about 700.

$1\% \text{ of } 700 = 0.01 \cdot 700$

$= 7$

To multiply by 1%, move the decimal point two places to the left.

FOR 1% MOVE THE DECIMAL ONE PLACE TO THE LEFT

One half of 7 is $\frac{1}{2} \cdot 7$ or 3.5.

So, 0.5% of 697 is about 3.5.

80% IS 20% FOUR TIMES

5 x 4 = 20

Exercises

Estimate.

1. 24% of 36

25% of 40 = 10

0.24 x 36 = 8.64

2. 81% of 25

10% of 25 = 2.5

20% of 25 = 5

80% of 25

50% of 25 = 12.5

25% of 25 = 6.25

5% of 25 = 1.25

20

3. 11% of 67

10% of 70 = 7

7. 0.4% of 200

0.5% of 200 = 1

1% of 200 = 2

8. 42% of 61

9. 19% of 41

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Lesson 2 Skills Practice

Percent and Estimation

130 → 100 ÷ 2 = 50 > 65
130 → 30 ÷ 2 = 15

Estimate by using fractions.

1. 51% of 128

$\frac{1}{2}$% of 130 = 65

3. 32.9% of 90

5. 19% of 45

Estimate by using 10%.

7. 12% of 98

10% of 100 = 10

9. 31% of 80

11. 62% of 13

Estimate.

13. 308% of 500

15. 153% of 20

17. 231% of 54

19. 0.26% of 36

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