Name _____

Finding Percentages of Different Numbers

Problem

In a survey of 120 students it was found that 20% had personal stereos. How many students had personal stereos?

There are many ways to solve the problem. Here are three:

A   Change the percentage to a decimal, then multiply by the number of students.
20% = 0.20
120 x 0.20 = 24

B   Convert the percentage into a fraction in its simplest terms. Divide the number of students by the denominator then multiply by the numerator.

$20\% = \dfrac{20}{100} = \dfrac{10}{50} = \dfrac{1}{5}$

$\dfrac{1}{5}$ of 120 = 120 ÷ 5 = 24

C   Find 1% of the number of students by dividing by 100.
Multiply by the percentage needed.
100% = 120
1% = 1.20
20% = 20 x 1.20 = 24

Find these answers using method A:

1. 25% of 32   2. 75% of 36   3. 80% of 35

Find these answers using method B:

4. 10% of 142   5. 20% of 60   6. 35% of 70

Find these answers using method C:

7. 6% of 220   8. 15% of 150   9. 12% of 20

Choose your favourite method to work through this question:

10. 120% of 30

Answers

Find these answers using method A:

1. 25% of 32
25% = 0.25
32 x 0.25 = 8

2. 75% of 36 = 27

3. 80% of 35 = 28

Find these answers using method B:

4. 10% of 142
10% = 10/100 = 1/10
1/10 of 142 = 142 ÷ 10 = 14.2

5. 20% of 60 = 12

6. 35% of 70 = 24.5 or 24½

Find these answers using method C:

7. 6% of 220
100% = 220
1% = 2.2
6% = 6 x 2.2 = 13.2

8. 15% of 150 = 22.5 or 22½

9. 12% of 20 = 2.4

Choose your favourite method to work through this question:

10. 120% of 30 = 36