Ratios, Proportions and Percents

Problems with Percents

1. In a group of 60 children, 12 have brown eyes. What percent have brown eyes?

2. A salesman makes a 5% commission on all he sells. How much does h have to sell to make $1500?

3. A sales tax of $5\frac{3}{4}\%$ is charged on a blouse priced at $42. How much sales tax must be paid?

4. A baby weighed 7.6 pounds at birth and $9\frac{1}{2}$ pounds after 6 weeks. What was the percent increase?

5. A scale model of a building is 8% of actual size. If the model is 1.2 me tall, how tall is the building?

6. The purchase price of a camera is $84. The carrying case is 12% of th purchase price. Find the total cost including the carrying case.

7. The regular price of a record cost is $15. Find the discount and the n price if there is a 20% discount.

8. A basketball team played 45 games. They won 60% of them. How m did the team win?

9. A test had 50 questions. Joe got 70% of them correct. How many did Joe get correct?

0. Diet soda contains 90% less calories than regular soda. If a can of regular soda contains 112 calories, how many calories does a can o diet soda contain?

1) $\frac{x}{100} = \frac{12}{60}$

60 children
12 have Brn. eyes.

$\frac{60x}{60} = \frac{1200}{60}$

$1x = 20\%$

2) $\frac{5}{100} = \frac{1500}{x}$

5% comm.

$1500 make

$\frac{5x}{5} = \frac{150000}{5}$

$x = \$30{,}000$

4) $\frac{x}{100} = \frac{1.9}{7.6}$

7.6 lbs at birth

⋮ increased 1.9 lbs

9.5 lbs @ 6 weeks

$\frac{7.6x}{7.6} = \frac{190}{7.6}$

$x = 25\%$ increase

3) $\frac{5.75}{100} = \frac{x}{42}$

$100x = 241.5$

$1x = 2.415 = \$2.42$ tax

5) $\frac{8}{100} = \frac{1.2}{x}$

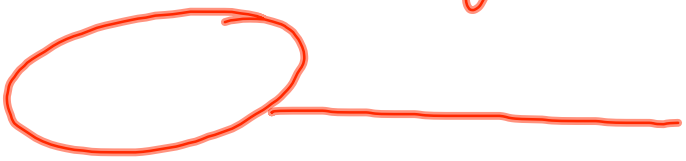
$\frac{8x}{8} = \frac{120}{8}$

$1x = 15$ M. tall

(6) $\frac{12}{100} = \frac{x}{84}$

$\frac{100x}{100} = \frac{1008}{100}$

$1x = \$10.08$ cost of case

$84 + 10.08 =$ 

7) $\frac{20}{100} = \frac{\bigcirc}{15}$