Mental Math and Estimation

The pipe straps in the example above each cost $0.0497. About how much will 50 pipe straps cost?

1. A computer repair technician fixes 8 printers for every 2 computers she repairs. What is the simplest form of this ratio? What are two ways you can write this ratio?

2. Sheena is a secretary at a high school in Newfoundland. She types 55 words per minute. How long will it take her to type a 2000-word report?

3. An apprentice mechanic rotates the 4 tires on a pick-up truck in 15 minutes. How long would it take him to rotate the tires on 5 trucks? How long does rotating 2 tires take?

4. Jane is selling tickets to see the band Vishten. She sells 4 tickets on Thursday, 6 on Friday, and an equal number each on Saturday and Sunday, for a total of 36 tickets sold over four days. How many tickets were sold each day on Saturday and Sunday? What proportion of the total sales took place on Saturday?

5. The ratio between Siu's height and the height of her brother Tai is 5:6. If Tai is 145 cm tall, how tall is Siu, to the nearest centimetre?

6. If the Sound Source music store makes a profit of $2550.00 on the sale of 200 DVDs, how much profit would the store make on the sale of 50? On the sale of 900?

The Acadian band Vishten is from Prince Edward Island. Their music has a Celtic sound and French lyrics.

7. Oliver's Restaurant purchases a 5-kg jar of olives for $15.00 through a wholesaler. How many kilograms would it get for $75.00? How much would it cost the restaurant to buy 20 kilograms?

8. Keri is a member of New Brunswick's Madawaska Maliseet First Nation. She works as a carpenter and is mixing a shade of stain for a set of cabinets she has built. The ratio for the shade she wants is 3 parts of Spanish oak to 4 parts of red mahogany. If she needs 12 litres in all, how many litres of each stain does she need?

9. Keiko says that the Japanese Bullet Train (Shinkansen) takes about 6 minutes to travel 30 km. Akira says that at this rate, he could travel around the world at the equator in less than 8 days. Keiko disagrees; she thinks it will take longer. Who is correct? Justify your response. The circumference of the earth at the equator is approximately 40 074 km.