1. Express the fraction as a percentage.

    (a) $\dfrac{1}{2}$

    (b) $\dfrac{2}{5}$

    (c) $\dfrac{7}{8}$

    (d) $\dfrac{1}{8}$

    (e) $\dfrac{5}{16}$

    (f) $\dfrac{7}{40}$

    (g) $\dfrac{1}{3}$ (using four decimal places)

    (h) $\dfrac{5}{6}$ (using two decimal places)

2. Express the decimal value as a percentage.

    (a) 1.839

    (b) 0.0145

    (c) 0.278

    (d) 0.15998

    (e) 18.76

    (f) 0.4593

    (g) 0.0128

    (h) 0.001359

    (i) 0.0002834

    (j) 23.496

    (k) 88

    (l) 0.00023997

3. Express the percentage as decimal value.

    (a) 28%

    (b) $33\dfrac{1}{8}\%$

    (c) 12.185%

    (d) 37.183%

    (e) 9.128%

    (f) 0.0024%

    (g) 0.125%

    (h) 3 ½ %

    (i) 3.1415%

    (j) $\dfrac{3}{4}\%$

    (k) 297%

    (l) 100%

    (m) 14.75%

For each question below, model the question using a linear equation. Solve the linear equation and answer the question.

4. What is 25% of 125?

5. 33% of 450 is what?

6. 8 is what percentage of 40?

7. 25% of 160 is what?

8. 65 is what percentage of 250?

9. 46 is 37% of what?

10. 79 is 67% of what?

11. What is 97% of 2,345?

12. 6.125 is what percentage of 175?

13. 579 is 2.5% of what?

14. What is 75% of 300?

15. 120 is what percentage of 500?

16. You purchase a TI-84 CE graphing calculator on staples.com for $161.99. Create an equation which models the amount that you pay for the calculator in Massachusetts. Solve the equation to determine the amount that you pay for the calculator.

17. You purchase an *Eggs & Cheese Protein Box* at Starbucks for $5.75. Create a linear equation which models the amount you pay in Framingham, Massachusetts. Solve the equation to determine the total amount that you pay.

Sales Tax on Meals in Massachusetts: https://www.mass.gov/guides/sales-tax-on-meals
Cities and Towns in Massachusetts with 0.75% Meals Tax: https://dlsgateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=LocalOptions.Local_Options_Tax