



2. (a) Solve the absolute value equation

$$3|7x - 10| + 17 = 92.$$

(b) Find a formula for  $f^{-1}(x)$  if  $f(x) = \frac{7x}{1 - 2x}$ .

3. Find an equation for the line  $\ell$  that passes through the point  $(32, -1)$  and is perpendicular to the line  $k$  that passes through the points  $(-52, 7)$  and  $(8, -33)$ .
4. A friend of yours is trying to decide which job to take. McRichard's is offering \$15.70 per hour and a bonus of 3 cents per burger served. Cindy's, on the other hand, offers only \$13.50 per hour, but a better bonus of 5 cents per burger served.
- (a) Write an equation for the total hourly compensation  $M(x)$  at McRichard's of an employee serving  $x$  burgers per hour.
- (b) Write an equation for the total hourly compensation  $C(x)$  at Cindy's of an employee serving  $x$  burgers per hour.
- (c) Write and solve an inequality to advise under which conditions it would be more profitable to work at Cindy's. Give a short explanation of your answer in English.

5. (a) Write an equation in standard form of the parabola described by the general form

$$f(x) = 2x^2 - 20x + 32.$$

- (b) Write an equation for the parabola shown in the picture and leave your answer in general form.

