1 y varies directly with x and $y = 24$ when $x = 8$.
    a Write an equation connecting y and x, using k as the constant of variation.
    b Calculate the constant of variation.
    c What is y when x is 4?
    d What is x when y is 15?

2 y varies directly with x and $y = 20$ when $x = 10$.
    a Write an equation connecting y and x, using k as the constant of variation.
    b Calculate the constant of variation.
    c What is y when x is 8?
    d What is x when y is 12?

3 It is known that y varies directly with x. When $x = 12$ then $y = 3$.
    a Write an equation connecting y and x, using k as the constant of variation.
    b Calculate the constant of variation.
    c What is y when x is 24?
    d What is x when y is 4?

4 It is known that a varies directly with b. If $a = 84$ then $b = 56$.
    a Write a linear equation connecting a and b, using k as the constant of variation.
    b Calculate the constant of variation.
    c Find the value of a when the value of b is 22.
    d Find the value of b when the value of a is 36.

5 Oscar's pay (p) is directly proportional to the number of hours (h) he works. For a 9-hour day he receives \$193.50.
    a Write a linear equation to describe this situation.
    b Calculate the constant of variation.
    c What is Oscar's pay if he works for 11 hours?
    d What is Oscar's pay if he works for 6.5 hours?
    e How many hours does Oscar have to work to earn \$365.50?
    f How many hours does Oscar have to work to earn \$752.50?