MF7 pg. 415/416

B Practising

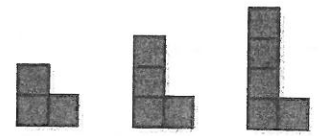


figure 1 figure 2 figure 3

2. **a)** Make a table of values for the pattern at the left.
b) Write a pattern rule for the number of tiles in each figure.
c) Write an equation to determine which figure has 22 tiles.
d) Solve your equation.

3. **a)** Make a table of values for this pattern.

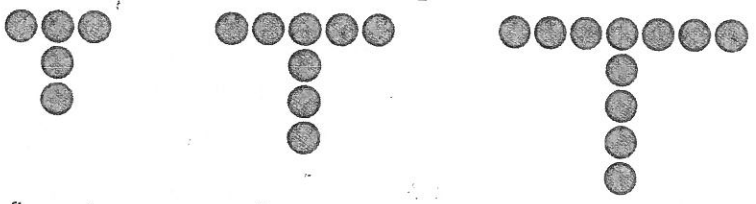
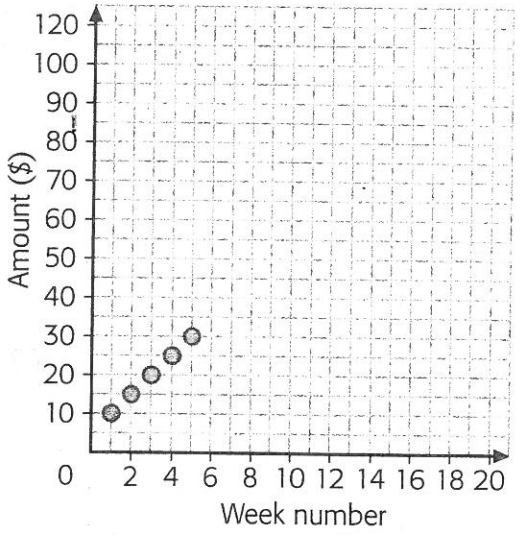


figure 1 figure 2 figure 3

b) Write a pattern rule for the number of counters in each figure.
c) Write an equation to determine which figure has 23 counters.
d) Solve your equation.

4. This graph shows David's bank balance.



a) Make a table of values from the graph.
b) Create a pattern rule to represent David's bank balance at w weeks.
c) Write an equation to determine when his bank balance is \$60.
d) Solve your equation.
e) When will David's bank balance be \$100?
f) What will it be after 20 weeks?

5. Which figure in each pattern has exactly 97 toothpicks?

a)

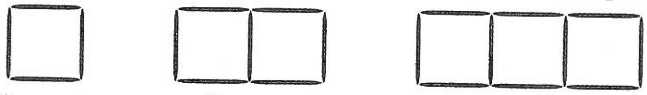


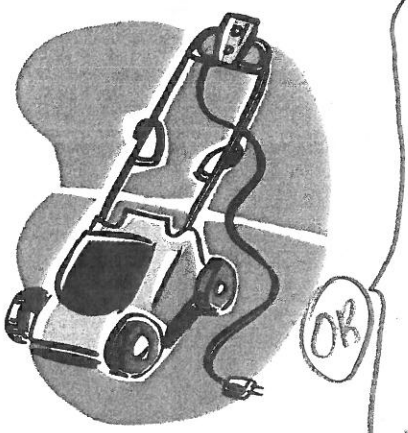
figure 1 figure 2 figure 3

b)

figure 1 figure 2 figure 3 figure 4

6. Graph these pattern rules on the same set of axes. Use a different colour for each rule. Solve each rule for $r = 17$ using your graph.

a) $r = 2n + 5$ **b)** $r = 2n + 7$ **c)** $r = 2n + 9$

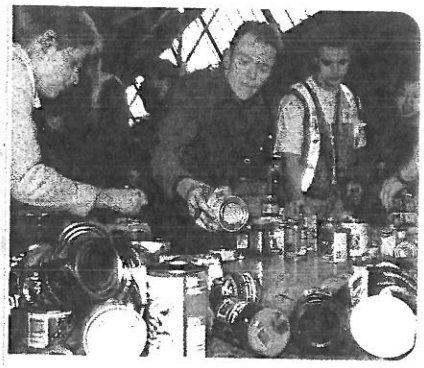


7. Rowyn can rent an electric lawn mower for $100. She charges $15 to mow a lawn. She wants to know how many lawns she needs to mow to earn enough money to buy a used guitar and amplifier priced at $425.

a) Graph this situation. Put the number of lawns Rowyn might mow on the horizontal axis and the amount she will earn on the vertical axis.

b) Write an expression that relates Rowyn's earnings to the number of lawns she mows.

c) Solve an equation to determine how many lawns Rowyn needs to mow.



8. A grocery store collects donated canned food for a food bank. The cans are packed in boxes that hold 24 cans. The store has collected 744 cans. How many boxes does the store need?

a) Graph this situation. Put the number of boxes on the horizontal axis and the number of cans on the vertical axis.

b) Determine the number of boxes needed using your graph.

c) Write an expression to relate the number of boxes needed to the number of cans.

d) Solve an equation to determine the number of boxes needed.

e) You have solved this problem in two ways. How else could you have solved it?

9. Suppose that an equation looks like $x +$ $= 12$. Describe how you could use the graph of $y = x +$ to solve the equation.