BRICKWORK
mathematics

Post Learning Assessment
Algebra Year 6

f=sin(x)

Algebra

1) What is the value of n in the following equations:

a) 20 – 4 – n = 8

n =

b) 12n = 48

n =

c) 5n ÷ 4 = 10

n =

2) Workout the value of a

$$a^2 = 42 + a$$

a =

3a) Write the formula for area of a rectangle:

b) Find the area of a rectangle with the sides 4cm long and 9cm long.

4) Harvey is at a fair. He visits a sweet stall with his sister Imogen. He sees this sign to help him to know how much the sweets will cost:

£1.50 per 100g + 15p for the container

a) Harvey only has £3.20 in his wallet. Approximately how many grams can he buy?

b) Imogen weighs her sweets and they weigh 350g. How much money will she need to pay?

c) Imogen and Harvey's dad has £10. How many grams can he buy to the nearest 50gs.

5) Continue the number sequence and describe the pattern:

213,   258,   303 ,   348, _____ , _____

6) Henry uses this formula to write a sequence of numbers. He starts with the number 360

$$n \div 3 + 6$$

Work out the 3rd term in the sequence:

7) Work out the value of the missing amounts asked for in each question:

a + b = 15	b x 3 = 15	a =
c ÷ 5 = 4	d + 2 = c	d =
e – f = 2	12 + e + f = 20	e =

8) Sophia has £1.25 to spend in her local newsagents. She collects football stickers in a folder and wants to buy some more things for her folder. Below is how much each item costs:
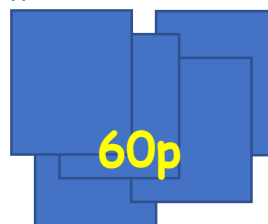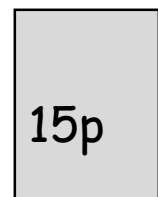
20p	25p	60p	15p
1 blue sticker	1 metallic sticker	1 pack of 5 stickers	1 plastic wallet
b	m	p	w

What can she buy with the whole amount of money? Write this as an algebraic equation using the symbols suggested.

9) a is a multiple of 4 and b is a multiple of 3. Find the missing values to make this sum correct.

$$50 - \boxed{a} \quad = \quad 7 \times \boxed{b}$$

a =

b =

10) Below is a product pyramid. Find the missing numbers:

Pyramid values:
- Top: (empty)
- Middle row: 10, (empty)
- Bottom row: (empty), 5, 9