BRICKWORK
mathematics

Post Learning Assessment
Algebra Year 6 Answers

f=sin(x)

Algebra

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

a) $20 - 4 - n = 8$

$n = 8$

b) $12n = 48$

$n = 4$

c) $5n \div 4 = 10$

$n = 8$

2) Workout the value of a

$$a^2 = 42 + a$$

$a = 7$

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

length x width

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

$4 \times 9$

$36cm^2$

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?

200 g x 1.50 = 3.00 + 15p = £3.15

200 g

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

300g = 3 x 1.50 = 4.50
50g = 75p
4.50 + 0.75 + 0.15 = 5.40

£5.40

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

6 x 1.50 = 9.00
50g =  75p  = £9.75 + 15p

650g

5) Continue the number sequence and describe the pattern:

213, 258, 303, 348, **393**, **438**

n + 45 or it increases by 45 each time.

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

$$n \div 3 + 6$$

Work out the 3$^{rd}$ term in the sequence:

**360** ÷ 3 = 120          120+ 6 = 126
**126** ÷ 3 = 42          42+ 6 = 48
**48**

48

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

| a + b = 15 | b × 3 = 15 | a = **10** |

| c ÷ 5 = 4 | d + 2 = c | d = **18** |

| e – f = 2 | 12 + e + f = 20 | e = **5** |

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:
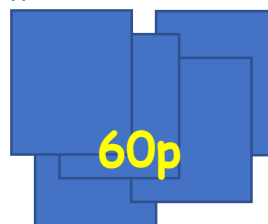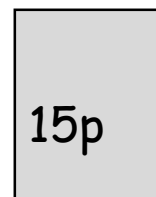
| 20p | 25p | 60p | 15p |
| 1 blue sticker | 1 metallic sticker | 1 pack of 5 stickers | 1 plastic wallet |
| **b** | **m** | **p** | **w** |

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

Suggestions: (also accept any other correct answers)
5b + m = £1.25          p + 2m + w = £1.25
p + 2m + w = £1.25      3b+ 2m + w = £1.25
p + 2b + m = £1.25      3w + p + b = £1.25

BRICKWORK
Mathematics

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

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

a = **8**

b = **6**

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



450

10 | 45

2 | 5 | 9