## PASS TIONAL FUNCTS

## FUNCTIONAL SKILLS MATHEMATICS

AQA | Edexcel | City \& Guilds | Open Awards | NCFE | Highfield Level 2

## Best Buys

## Materials

- You cannot use a calculator for questions with this symbol.



## Instructions

- Answer all questions.
- Answer questions on separate paper.


## Information and Advice

- The marks for each question are shown in brackets - use this as a guide on how long to spend on each question.
- Read each question carefully before you answer it.
- Check you answers.

Q1 Find the price per item in each of these cases.

1(a) 10 biscuits for $£ 9.00$

1(b) 6 packets of crisps for $£ 3.60$

1(c) 24 cans of cola for $£ 18.00$

1(d) 200 cotton buds for $£ 4.00$

1(e) 5 muffins for $£ 2.50$

1(f) 22 crispy cake bites for $£ 3.30$
$\mathbf{1 ( g )} \quad 14$ slices of ham for $£ 2.10$

1(h) 4 beef burgers for $£ 2.00$

1(i) 6 apples for $£ 1.50$

1(j) 8 bananas for $£ 2.24$

Q2 Ciara is in the supermarket, and passes a number of multipack items. Can you help her work out the cost per item?

2(a) She first passes a pack of 6 plums, which are priced at $£ 2.40$.

2(b) She then passes a pack of 4 yoghurts, which cost $£ 3.60$.

2(c) $\quad$ She passes a pack of 4 brioche buns, priced at $£ 2.80$.

2(d) Finally, she passes a pack of 16 potato waffles, which cost $£ 2.56$.

Q3 Find the price per 100 g or 100 ml or 1 slice of these products.

3(a) 500 g of mince for $£ 3.00$

3(b) 120 g of crisps for $£ 2.40$
[1 mark]

3(c) $\quad 3000 \mathrm{ml}$ of cola for $£ 6.00$

3(d) $\quad 50 \mathrm{~g}$ of loose peppers for $£ 0.35$
[1 mark]

3(e) 150 g of red onions for $£ 0.45$
[1 mark]

3(f) $\quad 1500 \mathrm{~g}$ of cake for $£ 12.00$
$\mathbf{3 ( g )} \quad 14$ slices of ham for $£ 2.10$

3(h) $\quad 5000 \mathrm{~g}$ of pasta for $£ 7.00$
[1 mark]

3(i) 600 g of pears for $£ 3.00$

3(j) $\quad 1500 \mathrm{ml}$ of orange juice for $£ 1.50$

Q4 A number of supermarkets compete with each other over a multipack deal on crisps. Work out the cost per packet of crisps.

4(a) 12 packets of crisps for $£ 4.80$

4(b) 6 packets of crisps for $£ 3.00$

4(c) $\quad 36$ packets of crisps for $£ 9.00$

4(d) 24 packets of crisps for $£ 7.20$

Q5 Amjad is buying drinks for a party. He notices deals on several drinks that he wants to buy. Which is the best deal in each category?

5(a) Cola:
3 L for $£ 4.50$
1.5 L for $£ 2.25$

2 L for $£ 2.40$
1.75 L for £2.31

5(b) Lemonade:
250 ml for $£ 0.50$
500 ml for $£ 0.75$
330 ml for $£ 0.66$
750 ml for $£ 1.05$

5(c) Cherryade:
1 L for $£ 1.00$
1.25 L for $£ 1.25$

2 L for $£ 1.50$
2.5 L for $£ 2.00$

Q6 Find the best buys from these triples.

6(a) 1 L for $£ 1.00,2 \mathrm{~L}$ for $£ 1.50,4 \mathrm{~L}$ for $£ 2.00$

6(b) $\quad 100 \mathrm{~g}$ for $£ 5.00,200 \mathrm{~g}$ for $£ 9.00,500 \mathrm{~g}$ for $£ 23.00$
[2 marks]

6(c) 100 ml for $£ 0.50,500 \mathrm{ml}$ for $£ 2.00,1000 \mathrm{ml}$ for $£ 5.00$

6(d) 50 g for $£ 0.35,100 \mathrm{~g}$ for $£ 0.70,200 \mathrm{~g}$ for $£ 1.30$

6(e) $\quad 1$ for $£ 0.79,2$ for $£ 1.38,3$ for $£ 1.77$

6(f) 1000 L for $£ 1500,2000 \mathrm{~L}$ for $£ 2000,3000 \mathrm{~L}$ for $£ 3300$
[2 marks]

6(g) $\quad 10$ slices for $£ 2.00,14$ slices for $£ 2.10,16$ slices for $£ 2.56$

6(h) 500 g for $£ 0.70,2000 \mathrm{~g}$ for $£ 2.50,5000 \mathrm{~g}$ for $£ 7.00$

6(i) 4 for $£ 3.76,5$ for $£ 4.75,6$ for $£ 5.76$

6(j) $\quad 568 \mathrm{ml}$ for $£ 0.82,1136 \mathrm{ml}$ for $£ 1.30,2272 \mathrm{ml}$ for $£ 2.00$
[2 marks]

Q7 Sugar comes in bags of varying size and varying price: 0.5 kg for $£ 1.00$

1 kg for $£ 1.90$
2 kg for $£ 3.60$

7(a) Find the price of sugar per 100 g for each bag.

7(b) Which bag is the best buy?

7(c) What is the cheapest way to buy 2.5 kg of sugar? How much does it cost?

7(d) Eliza is going to bake a cake. The cake requires 0.75 kg of sugar for a 2 kg cake.
Eliza wants to make a 4 kg cake. How much sugar does she need?

7(e) What is the cheapest way for Eliza to buy her sugar? How much will it cost?

Q8 Find the cheapest way to buy the amount specified from the offers below.

8(a) 1 L for $£ 1.00,2 \mathrm{~L}$ for $£ 1.50,3 \mathrm{~L}$ for $£ 2.10$; Buy 5 L

8(b) 100 g for $£ 0.50,200 \mathrm{~g}$ for $£ 0.90,400 \mathrm{~g}$ for $£ 2.00$; Buy 700 g

8(c) 100 ml for $£ 5.00,400 \mathrm{ml}$ for $£ 12.00,700 \mathrm{ml}$ for $£ 15.40$; Buy 1500 ml

8(d) 500 g for $£ 0.75,1000 \mathrm{~g}$ for $£ 1.70,1500 \mathrm{~g}$ for $£ 2.10$; Buy 2000 g

8(e) 1 for $£ 0.29,2$ for $£ 0.48,3$ for $£ 0.57$; Buy 7

8(f) 100 L for $£ 15000,200 \mathrm{~L}$ for $£ 20000,300 \mathrm{~L}$ for $£ 33000$; Buy 900 L

8(g) 1 slice for $£ 0.30,14$ slices for $£ 4.06,26$ slices for $£ 5.20$; Buy 31 slices

8(h) $\quad 500 \mathrm{~g}$ for $£ 0.70,2000 \mathrm{~g}$ for $£ 2.50,5000 \mathrm{~g}$ for $£ 7.00$; Buy 7500 g

8(i) 8 for $£ 37.60,10$ for $£ 47.50,12$ for $£ 57.60$; Buy 72

8(j) 568 ml for $£ 1.00,1136 \mathrm{ml}$ for $£ 1.90,2272 \mathrm{ml}$ for $£ 3.70$; Buy 3408 ml

$$
\text { Q9 } \begin{aligned}
& \text { A shop sells sponges in three different packages: } \\
& \text { Package A contains } 5 \text { sponges and costs } £ 2.50 \\
& \text { Package B contains } 20 \text { sponges and costs } £ 8.00 \\
& \text { Package } C \text { contains } 2 \text { sponges and costs } £ 0.90
\end{aligned}
$$

9(a) Find the cost per sponge of each of the packages.

9(b) Which package is the best buy?

There is now a special offer on package A , reducing its cost to $£ 1.50$.

9(c) How much is package A per sponge now?

9(d) Is package A now the best buy?

Q10 Find the best buys out of $A, B$ and $C$, with the special offer applied.

10(a) $\mathrm{A}-50 \mathrm{~L}$ for $£ 20.00$
B-35L for $£ 10.50$
C -25 L for $£ 8.00$
Package A is placed on $50 \%$ discount.

10(b) $\mathrm{A}-100 \mathrm{~g}$ for $£ 1.00$
B - 200 g for $£ 3.00$
C -400 g for $£ 4.40$
Package B is placed on $30 \%$ discount.

10(c) $\mathrm{A}-80$ for $£ 8.00$
B - 120 for $£ 20.00$
C - 40 for $£ 6.00$
Package B is placed on $25 \%$ discount.

10(d) $\mathrm{A}-4 \mathrm{~kg}$ for $£ 5.00$
B -2 kg for $£ 2.50$
C -6 kg for $£ 12.00$
Package C is placed on $40 \%$ discount.

10(e) A - 500 ml for $£ 1.70$
B-1 L for $£ 2.40$
C-2 L for £3.10
Package A is placed on $50 \%$ discount.

10(f) A - 500 g for $£ 3.00$
B - 1000 g for $£ 8.00$
C -750 g for $£ 6.00$
Package B is placed on $10 \%$ discount.

Q11 The following lists the price structure for three taxi companies:
Harrogate Taxis - $£ 2.20$ per mile.
Station Cars - Flat rate of $£ 1.80, £ 3.00$ for the first mile, $£ 1.60$ for subsequent miles.
Speedway's Taxi Rank - Flat rate of $£ 2.00$, $£ 1.80$ per mile.

11(a) How much would it cost to travel 1 mile with each taxi company?

11(b) Norbert travels 5 miles using Station Cars. How much does this cost?

11(c) Could Norbert have saved money by using Harrogate Taxis?

11(d) Which taxi company would be best for a 3 mile journey?

11(e) Would the same taxi company be best for a 3 mile journey and for a 20 mile journey?

Q12 Patricia is purchasing chairs and organising their delivery for a logistics company. Her options to buy chairs are:
A - 100 chairs for $£ 5000$
B - 400 chairs for $£ 16000$
C - 1000 chairs for $£ 60000$
Her options for delivery are:
a - £1.00 per chair
b - Flat rate of $£ 200$ then $£ 0.80$ per chair.
c - Flat rate of $£ 150$ then $£ 0.01$ per chair per mile.
Patricia would like to buy 1700 chairs, and is 60 miles away from the place she is buying the chairs.
When she phones to order the chairs, she is informed of a special offer which reduces the price of group $C$ of chairs by $10 \%$.
What is her cheapest option for both chairs and delivery?

