

N5 Applications of Maths: Pupil Profile  
Answers

**Numeracy**

Topic 1: Non Calculator

- 1) 6.39
- 2) 18.66
- 3) 15.79
- 4) 16.68
- 5) 44
- 6) 7.5
- 7) 8.1
- 8) 46.8
- 9) 670
- 10) 0.0098

- 1) 15
- 2) 25
- 3) 35
- 4) 36
- 5) 35
- 6) 4
- 7) 5
- 8) 4
- 9) no, 5

Topic 2: Negative Numbers and Scale

- 1) -4
- 2) -3
- 3) -14
- 4) -27
- 5) -38
- 6) -110
- 7) 6
- 8) 28
- 9) 712
- 10) -£335

- 20°C  
-5 °C  
-12.5 °C  
240g  
640g

Topic 3: Ratio and Proportion

- 1) 1:8
- 2) 5:1

|   |
|---|
| 3) 5:12<br>4) 3:4<br>5) 1:4000  |
| 1a) 4:1<br>b) 5<br>c) 52<br>2a) 35<br>b) 132<br>3) 330  |
| 1) 150:200<br>2) 3000:7000<br>3) 1800:1200:1500   |
| 1a) £4.70<br>b) £28.20<br>2) 96mins<br>3) £59.50<br>4) Ben = 5000000, Tim = 6000000, Megan = 3000000, Yas = 4000000 |
| 1) 25 hours<br>2) 40mph<br>3) 8 days  |

#### Topic 4: Percentages

|  |
|--|
| 1) 8kg<br>2) 10cm<br>3) 9m<br>4) 7.5kg<br>5) 22.50ml |
| 1) 48m<br>2) 24.8kg<br>3) 14.1g<br>4) 465            |
| 1) 495<br>2) 480<br>3) 268.8m<br>4) 272kg            |
| 1) £15816<br>2) £5814<br>3) 15°C                     |
| 1) £550<br>2) 28000                                  |
| 1) 25%<br>2) 34%                                     |

#### Topic 5: Probability

- |  |
|--|
| 1) $\frac{1}{2}$<br>2) $\frac{1}{3}$<br>3) $\frac{12}{25}$<br>4) $\frac{1}{3}$   |
| 1a) Red $\frac{1}{5}$ , Yellow $\frac{1}{4}$ , Blue $\frac{3}{20}$ , White $\frac{1}{10}$ , Black $\frac{3}{10}$<br>b) 30<br>c) 85 |
| 1) 0.29, 0.31, Game 2  |






### Topic 6: Fractions

- |   |
|---|
| 1a) $\frac{5}{3}$<br>b) $\frac{15}{4}$<br>c) $\frac{36}{7}$<br>d) $\frac{53}{6}$<br>e) $\frac{52}{7}$                         |
| 2a) $4\frac{2}{3}$<br>b) $5\frac{3}{4}$<br>c) $3\frac{6}{7}$<br>d) $11\frac{1}{3}$<br>e) $26\frac{3}{7}$                      |
| 1) $\frac{17}{30}$<br>2) $\frac{43}{90}$<br>3) $\frac{53}{15}$<br>4) $\frac{193}{28}$<br>5) $\frac{4}{7}$<br>6) $\frac{1}{7}$ |
| 1) $\frac{4}{15}$<br>2) 6   |




























### Topic 7: Time Management

- |  |
|--|
| 1a) 0.5<br>b) 0.4<br>c) 0.3<br>d) 1.1<br>e) 2.3                            |
| 2a) 15min<br>b) 1hr51min<br>c) 4hrs11min<br>d) 5hrs48min<br>e) 3 hrs20mins |
| 1) 54 miles<br>2) 50mph  |

- |   |
|---|
| 3) 1hr48min<br>4) 1056 miles<br>5) 1hr 36mins |
| 1) 2 hrs 30mins                               |

## Geometry and Measure

### Topic 1: Tolerance

- |  |
|--|
| 1a) min = 280ml, max = 320ml<br>b) 20.5g, 25.5g<br>2a) $300 \pm 200$ g<br>b) $575 \pm 75$ cm |
| 1) 80%<br>2) 57%   |

### Topic 2: Bearings + Scale Drawings

- |                      |
|----------------------|
| 1) 140ft<br>2) 150km |
|----------------------|

### Topic 3: Box Packing

- |         |
|---------|
| 1) 1000 |
|---------|

### Topic 4: Formulae

- |                         |
|-------------------------|
| 1) 22<br>2) 41<br>3) 33 |
|-------------------------|

### Topic 5: Pythagoras

- |                                  |
|----------------------------------|
| 1a) 16.2cm<br>b) 7.5cm           |
| 1) 61m<br>2) 49.3m               |
| 1) 19.7m                         |
| 1) 2.3cm<br>2) 20.4cm<br>3) 39cm |

### Topic 6: Gradient

|            |
|------------|
| 1) C D B A |
|------------|

### Topic 7: Area and Perimeter

|   |
|---|
| 1a) $P = 20\text{cm}$ $A = 25\text{cm}^2$ |
|---|

|  |
|--|
| b) $P = 38\text{cm}$ $A = 70\text{cm}^2$ |
|--|

|  |
|--|
| c) $P = 26.5\text{cm}$ $A = 27\text{cm}^2$ |
|--|

|   |
|---|
| 1a) $C = 31.4\text{cm}$ $A = 78.5\text{cm}^2$ |
|---|

|  |
|--|
| b) $C = 25.1\text{cm}$ $A = 50.3\text{cm}^2$ |
|--|

|   |
|---|
| 1a) $P = 24.26\text{cm}$ $A = 558\text{cm}^2$ |
|---|

|   |
|---|
| b) $P = 86\text{cm}$ $A = 496\text{cm}^2$ |
|---|

|                        |
|------------------------|
| 2a) $19.14\text{cm}^2$ |
|------------------------|

|                       |
|-----------------------|
| b) $86.25\text{cm}^2$ |
|-----------------------|

|           |
|-----------|
| 1) 148.34 |
|-----------|

|               |
|---------------|
| 2) £63,163.88 |
|---------------|

### Topic 8: Surface Area and Volume

|                     |
|---------------------|
| 1) $700\text{cm}^2$ |
|---------------------|

|                      |
|----------------------|
| 1a) $420\text{cm}^2$ |
|----------------------|

|                     |
|---------------------|
| b) $600\text{cm}^2$ |
|---------------------|

|                   |
|-------------------|
| 2a) $10\text{cm}$ |
|-------------------|

|                 |
|-----------------|
| b) $4\text{cm}$ |
|-----------------|

|                       |
|-----------------------|
| 1a) $1356\text{cm}^2$ |
|-----------------------|

|                     |
|---------------------|
| b) $523\text{cm}^2$ |
|---------------------|

|                      |
|----------------------|
| c) $39.9\text{cm}^2$ |
|----------------------|

|            |
|------------|
| 2a) $2.37$ |
|------------|

|                   |
|-------------------|
| b) $3.5\text{cm}$ |
|-------------------|

|                   |
|-------------------|
| c) $6.6\text{cm}$ |
|-------------------|

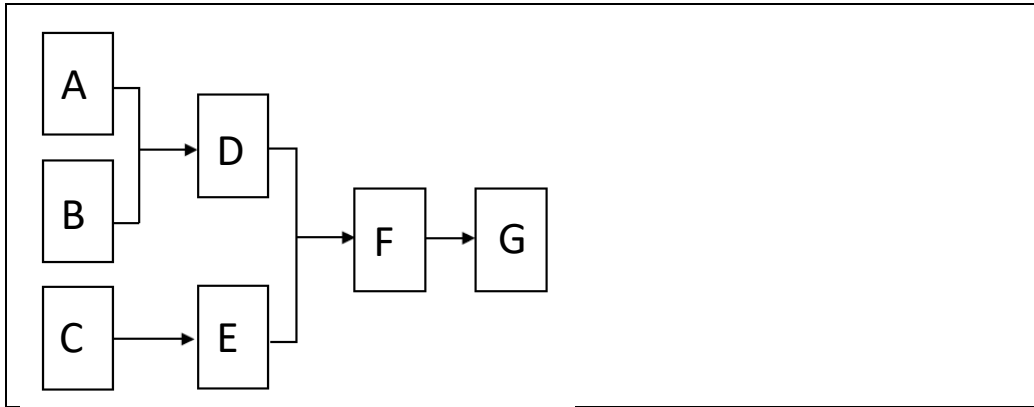
|                      |
|----------------------|
| 1) $4180\text{mm}^3$ |
|----------------------|

|                     |
|---------------------|
| 2) $550\text{cm}^3$ |
|---------------------|

|                      |
|----------------------|
| 3) $5300\text{cm}^3$ |
|----------------------|

|                  |
|------------------|
| 1) $27\text{mm}$ |
|------------------|

### Topic 9: Precedence



Topic 1: Factors Affecting Income

- 1) £396
- 2) £504
- 3) £292.80

- 1) £196.10
- 2) £297.60

|           |               |                    |               |
|-----------|---------------|--------------------|---------------|
| Wage      | £672.50       | Income Tax         | £81.25        |
| Overtime  | £110          | Pension            | £64.50        |
|           |               | National Insurance | £26.80        |
| Gross Pay | <b>782.50</b> | Deductions         | <b>172.55</b> |
|           |               | Net Pay            | <b>609.95</b> |

|           |            |                    |               |
|-----------|------------|--------------------|---------------|
| Wage      | <b>400</b> | Income Tax         | 88.20         |
| Comission | <b>14</b>  | Pension            | 45.10         |
|           |            | National Insurance | 18.60         |
| Gross Pay | <b>414</b> | Deductions         | <b>151.90</b> |
|           |            | Net Pay            | <b>262.10</b> |

Topic 2: Foreign Exchange

- 1) 456
- 2) 84906
- 3) 2455
- 4) £24.91
- 5) £307.02

6) 9.84 dollars or £7.69

7) 266969 yen

1) £1150.88

2) £2276.61

### Topic 3: Interest

1) £3360

2) 8%

1) 2189.98

2) 4 years

3) 5370000

### Topic 4: Averages

1a) 13

b) 13.5

c) 12

d) 9

2a) 15.2

b) 15.5

c) 16 and 8

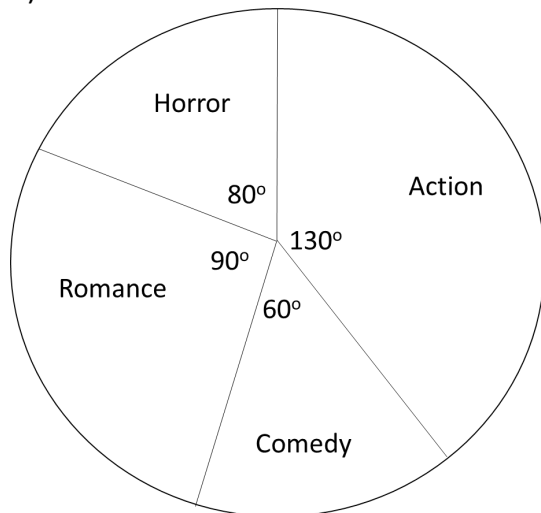
d) 7

1) The average height of the first class was 3cm lower than the second class.

2) Area one has a higher house price than area 2

### Topic 5: Charts and Graphs

1)



b) 1/6

2) 9

1) Draw Scattergraph

2) approx. 90kg

### Topic 6: Statistics

1a)  $L = 3$ ,  $Q1 = 3.5$ ,  $Q2 = 5$ ,  $Q3 = 8.5$ ,  $H = 15$   
b) Drawn Boxplot

1a) £2.20  
b) 0.475

1a) £2608  
b) The average price of a car sold in the second dealership, is less than that of in the first by £500. The prices of the cars sold in the second dealership varies less than that of the first.