

Unit 1: ANGLES & DEGREES (page 1)	
Errata: NIL	
<p>Mental test:</p> <ol style="list-style-type: none"> 1 right angle, 2 right angles, 1 1/3 right angles $x = 130$ degrees, $y = 60$ degrees 3 right angles obtuse obtuse acute (a) 90^0 (b) 180^0 (c) 120^0 (a) 90^0 (b) 60^0 (c) 150^0 Angle a = 135^0 (a) 90^0 (b) 90^0 (c) 135^0 	<p>Problems:</p> <ol style="list-style-type: none"> Angle a: right angle = 90^0; Angle b: obtuse angle = 155^0; Angle c: acute angle = 25^0 (a) 45^0 (b) 90^0 (c) 135^0 (d) 180^0 (e) 225^0 (f) 270^0 (a) NW (b) N (c) NE (d) NW A = 20^0; B = 120^0 (a) e = 40^0 (b) b = 20^0 (c) c = 130^0 (d) Possible answers: a, b, d, e (e) c (drawing) $x = 160^0$; $y = 20^0$; a = 60^0; b = 120^0 (a) 90^0 (b) 270^0 (c) 150^0 (d) 210^0 (a) Triangle C (b) Triangle A (c) Triangle B (a) Angle F, (b) Angle G, (c) 40 degrees, (d) 140 degrees (a) triangle, square, hexagon; (b) Angle A = 120^0; Angle B = 90^0; Angle C = 60^0
Unit 2: AREA (page 7)	
Errata: (i) Problem Number 2b: change 120 cm^2 to 135 cm^2 (ii) Problem Number 3: the fountain is 2cm wide (see diagram)	
<p>Mental Test:</p> <ol style="list-style-type: none"> 64 cm^2 32 cm^2 17.5 m^2 $10,000\text{ cm}^2$ $40,000\text{ cm}^2$ 5cm 20cm 16 cm^2 10 cm^2 200 tiles Shape A = 68 cm^2 Shape B = 65 cm^2 	<p>Problems:</p> <ol style="list-style-type: none"> (a) Area of B = 156 m^2 (b) Area of A = 244 m^2 (a) 108 cm^2 (b) 3 more squares (see errata) (a) 7 m^2 (see errata) (b) 12 m^2 (c) 41 m^2 (diagram) (a) 7200 cm^2 (b) $15,600\text{ cm}^2$ (a) 375 cm^2 (b) 96 cm^2 (c) 279 cm^2 (a) 15 m^2 (b) 9m (c) 7m (d) 48 m^2 1500 tiles (a) 25m (b) 1250 m^2 (a) 60 cm^2 (b) 7.5 cm^2 (c) 30 cm^2
Unit 3: AVERAGES (page 12)	
Errata: NIL	
<p>Mental Test:</p> <ol style="list-style-type: none"> 12 65c 24 bottles 63c 134cm 34c 2 5.5 22 marbles 85mm 	<p>Problems:</p> <ol style="list-style-type: none"> (a) 112 (b) 16 years (a) 47.25 kg (b) 54.5 kg (c) 61 kg 29^0 (a) Sun 27^0, Mon 28^0, Tues 36^0, Wed 31^0, Thur 28^0, Frid 27^0, Sat 26^0 (b) 29^0 (c) Averages are the same. (a) 130g (b) 21g (c) 24g 12 kg (a) 330 kg (b) 300 kg (a) 55 marks (b) 61 marks (a) 5 marks (b) Below. By 1 mark. 59 marks

Unit 4: CAPACITY (page 16)	
Errata: Problem number 6: change 6 litres to 1.5 litres.	
Mental Test: 1. 0.26 litres 2. 1800 ml 3. 3.5 litres 4. 700 ml 5. 6 glasses 6. 4.1 litres 7. 5400 ml or 5.4 litres 8. 5 ml 9. 52.5 litres 10. 30 glasses	Problems: 1. 1050 ml 2. pail = 5 litres, well = 10,000 litres, glass = 250ml 3. (a) 75 ml (b) 125 ml (c) $125/200 = 5/8$ 4. (a) 10 cups (b) 4 kettles (c) 8 litres 5. 10 cups 6. 3000cm^3 (see errata) 7. (a) 12 ml (b) 65 ml 8. 9.7 litres 9. 9.76 bottles 10. 44 litres
Unit 5: COMPASS POINTS (page 18)	
Errata: NIL	
1. (a) South (b) Playingfield (c) Grocer Pharmacy (d) Pharmacy 2. (a) East (b) South West (c) North East (d) South East (e) South 3. (a) North East (b) East (c) South (d) South (e) South West 4. (a) East (b) South East (c) insert M in lower left box (d) insert T in upper right box 5. (a) picnic area (b) 90 degrees (c) South West (d) East 6. (a) North (b) West (c) North East (d) South East 7. (a) 45 degrees (b) 225 degrees (a) South West (b) South West 8. from top to bottom: (North) NW, W, SE, SW 9. first draw the diagram (a) North East (b) South West 10. (a) East (b) South West (c) North	
Unit 6: DECIMAL FRACTIONS (page 22)	
Errata: NIL	
Mental Test: 1. 0.43, 4.3, 4.31, 43, 43.1 2. $7/10$ 3. 0.6 4. 4.0 5. 50% 6. 100 7. 1.4 8. $0.1 = 10\%$, $0.75 = 75\%$, $0.2 = 20\%$ 9. 0.8 10. 0.6	Problems: 1. 142.45 2. 100 marbles 3. (a) 7540 (b) 7.654 (c) 0.55 (d) 0.15 4. 13 bags 5. (a) 3240 (b) 35.1 (c) 27 6. (a) 65.16 (b) 0.6516 (c) 2.25 (d) 0.4 7. (a) 2.02, 2.2, 21.2, 210 (b) 0.043, 0.43, 4.03, 4.5, 40.3 8. (a) 0.9, 1.1. (b) 3.1, 3.6. 9. (a) 4.75 (b) 0.45, 0.5, 0.54, 4.5, 45 10. 60c
Unit 7: GRAPHS (page 26)	
Errata: NIL	
Problems: 1. (a) 25 (b) 15 litres 2. (a) 0.8 (b) – see diagram 3. (a) Thursday & Friday (b) 10°C (c) 5°C (d) Wednesday (e) 8°C 4. (a) 2 ice creams (b) Thursday (c) 8 (d) €72	

<p>5. (a) Week 1: David = 7, Mario = 9, Gina = 5, Marthese = 10, Juliet = 9 Week 2: David = 5, Mario = 10, Gina = 1, Marthese = 9, Juliet = 9 (b) draw chart (c) Marthese & Mario (d) Gina (e) 19/74</p> <p>6. (a) 25 km (b) 75 km (c) 4 hrs (d) 7 hrs</p> <p>7. (a) Mon = 10, Tues=7, Wed=4, Thur=5, Frid=9 (b) Draw 4 1/2 suns (c) Monday (d) Wednesday</p> <p>8. (diagram)</p> <p>9. (a) 70 mm (b) 25 (c) 255 mm (d) 11 mm</p> <p>10. (a) 115 students (b) 30 students (c) 30 students (d) 28.75</p>	
Unit 8: LENGTH (page 32)	
Errata: NIL	
<p>Mental Test:</p> <p>1. 64</p> <p>2. 150</p> <p>3. 17 cm</p> <p>4. 2m</p> <p>5. 1 km 500 m</p> <p>6. 400 m</p> <p>7. 5500 m</p> <p>8. 40.5 m</p> <p>9. 975 m</p> <p>10. 8 m</p>	<p>Problems:</p> <p>1. (a) 2.01 m (b) 1207 cm</p> <p>2. (a) 45.6 cm (b) 152 mm</p> <p>3. 4.8m</p> <p>4. (a) 7 km (b) 110 m (c) 10 m</p> <p>5. 2m & 1/2m or 200cm & 50 cm</p> <p>6. (a) 4 routes (b) 8 km (c) 13 km (d) 9 km</p> <p>7. (a) 5.6 km (b) 3.36 km</p> <p>8. 1494 cm = 14.94 m</p> <p>9. (a) 750 cm (b) 9 knots (c) 705 cm (d) 0.55 m</p> <p>10. (a) 2.5 m (b) 2 metres per second</p>
Unit 9: Money & Bills (page 36)	
Errata: NIL	
<p>Mental Test:</p> <p>1. €50</p> <p>2. €0.11</p> <p>3. 170c</p> <p>4. 525c</p> <p>5. 496c / €4.96</p> <p>6. €37.5</p> <p>7. €21</p> <p>8. 3750c / €37.5</p> <p>9. €150</p> <p>10.1 chair = €10; 1 table = €55; Total = €65</p>	<p>Problems:</p> <p>1. (a) B (b) because biros are cheaper (17c instead of 23c)</p> <p>2. €600</p> <p>3. (a) €6.35 (b) 150g (c) 219c / €2.19 (d) €0.11 / 11c</p> <p>4. €18.75</p> <p>5. (a) 2750 tickets (b) €33,500</p> <p>6. 20</p> <p>7. €84</p> <p>8. (a) 16450c = €164.50 (b) 14 boxes (c) 16660c = €166.60</p> <p>9. (a) €16.50 (b) €9.10 (c) 5 bottles</p> <p>10. (a) €38 (b) €15</p>
Unit 10: NUMBERS – PLACE VALUE (page 39)	
Errata: NIL	
<p>Mental Test:</p> <p>1. 371</p> <p>2. 1899</p> <p>3. 1200</p> <p>4. 36</p> <p>5. 5416</p> <p>6. 620</p> <p>7. 7</p>	<p>Problems:</p> <p>1. A=16 B=21 C=9</p> <p>2. Any number between 650 - 749 (including both numbers)</p> <p>3. (a) 459 (b) 811 (c) 800 (d) 22</p> <p>4. 5634 / 5643</p> <p>5. A=15 B=1.8 C=7.7</p> <p>6. (a) 321 (b) 2812 (c) 144 (d) 6</p>

8. 0.4 9. 6 10. 680	7. (a) 2.5 (b) 125 (c) 125 (d) 1.25 8. (a) 742 (b) 1724 (c) 3600 (d) 137 9. (a) 49,299 (b) 49.5 (c) 4907 & 49 10. (a) 20 / 23 / 26 / 29 (b) 23 / 27 (c) 20 on Saturday, 23 on Sunday
Unit 11: Properties of Numbers and Number Patterns (page 42)	
Errata: NIL	
Mental Test 1. 3465 2. 28 3. 16 4. No 5. Even 6. 6 or 12 or 18 7. 1, 4, 9, 16 , 25, 36 , 49 , 64 8. 16, 25 9. 1, 3, 6, 10 10. square	Problems 1. 4685 2. (a) 56 (b) Possible answers: 49 & 63 (c) 49 3. (a) Fill in pyramid with number 80 in top rectangle & 150 in the rectangle beneath 3. (b) Fill in pyramid with number 1620 in top rectangle and number 30 beneath. 4. 3.3, 3.9 5. A=9 B=2 C=3 6. (a) Possible answers: 21 (eliminate if use in b), 23, 27, 29, 31, 33, 35 (eliminate if use in b), 37 (b) Possible answers: 21, 28, 35 (c) 25, 36 (d) 39 & 38 7. (a) the difference between 64 and 15, (b) always, (c) never 8. (a) 2002 (b) 16.99 (c) 29, 37 9. (i) 1, 2, 3, 4, 6, 9, 12 (ii) $16+25+36+49+64+81=271$ 10. (i) 26, 32 (ii) 11, 13, 15 (iii) 24, 32, 40, 48 (iv) 2, 3, 4, 6, 12
Unit 12: Percentages (page 45)	
Errata: NIL	
Mental test: 1. 75% 2. 70% 3. 25% 4. 25% 5. 45 votes 6. $0.3=30%$, $0.25=25%$, $0.8=80%$ 7. 27 children 8. 180 eggs 9. 80% 10. 75%	Problems: 1. a) 25% b) 20% c) 55% 2. a) 2 b) 10% c) 12 d) 60% e) 4 km 3. a) $6/24 = 1/4$ b) 25% c) shade 6 more rectangles 4. $70% = 70/100 = 7/10 = 0.7$ 5. a) 130 votes b) 130 votes c) 65 votes d) 65 votes e) 50% f) Melanie 6. a) 40% b) 20 students c) 4 children 7. a) $9/10$ b) 25 pupils c) 20 children 8. a) $15/100 = 3/20$ b) 45 books 9. a) €2940 b) €2352 10. 125 marbles
Unit 13: Perimeter (page 50)	
Errata: mental test: number 10, 150m long, find its width	
Mental test: 1. a) 5cm b) 20cm	Problems: 1. a) 24cm b) Length = 8cm width = 4cm

2. 6cm 3. 27cm 4. 110m 5. 18cm 6. 40cm 7. 20cm 8. 45cm 9. 14cm 10. 100m wide	2. a) 6cm b) 9cm c) 30cm 3. a) 52cm b) 153cm ² c) 76.5cm ² 4. 19.5cm 5. 6cm 6. 2cm 7. 100m 8. a) 211m b) 52.75m 9. a) 40cm b) 96cm 10. a) 30cm b) 15cm c) 450cm ²
Unit 14: Proportion (page 53)	
Errata: NIL	
Mental test: 1. 300c 2. €24 3. 84c 4. 576c 5. 2.5km 6. 20 minutes 7. 40 children 8. 100 minutes 9. 25km 10. €3.75	Problems: 1. a) €12 b) €3 2. a) 200m b) 5 minutes (300 seconds) 3. a) 6 minutes b) 15 pages c) 9 hrs 4. €420 5. a) 160 minutes b) 100 minutes c) 2kg 6. a) 96 sweets b) 5 boxes c) 6 hrs 40 mins 7. a) 15 litres b) 240 km 8. 87.5km 9. a) €560 b) €120 c) 154c 10. a) €1.50 b) €7.50 c) €9.25
Unit 15: Shapes (page 57)	
Errata: NIL	
Mental test: 1. Cylinder 2. scalene 3. 15cm 4. sphere 5. 36cm ² 6. 39cm 7. (a) 8. 0 9. 1 more 10. 24 cm	Problems: 1. Cube: 6 faces, 12 edges, 8 vertices Cylinder: 3 faces, 2 edges, 0 vertices Cone: 2 faces, 1 edge, 1 vertex 2. a) 30 cm b) 10cm, 5cm 3. Complete shape 4. a) possible answers: cube, cuboid, cone, cylinder b) Draw nets 5. Complete drawing 6. Complete drawing 7. a) 60 ⁰ b) 6 c) Shade d) equilateral 8. a) 6 b) 12 c) 8 d) 42cm e) 27cm ³ 9. a) 90 ⁰ b) shade c) 16cm d) 16cm ² 10. a) 1 b) 3 c) 1 d) no e) 2
Unit 16: Time	
Errata: NIL	
Mental Test: 1. 10.30am 2. Joseph 3. 8.15am	Problems: 1. (a) 4 Sundays (b) 20 days (c) Saturday 2. (a) 8.10 (b) 20:10hrs / 8.10pm 3. 17:35hrs

<p>4. 92 days 5. 32 days 6. 47 minutes</p> <p>7. Should read 7 instead of 6 (a) 29 days (b) 52 hours 30 minutes 8. 4 hours 55 minutes 9. 42 minutes 10. 39 weeks</p>	<p>4. (a) 6.45am/ 06:45 hrs (b) 7.10am/ 07:10 hrs (c) 8.05am/ 08:05 hrs (d) 10 minutes (e) 40 minutes 5. 7.40am</p> <p>6. (a) 1 hour 45 minutes (b) 1 hour / 60 minutes (c) 1 hour 50 minutes / 110 minutes 7. (a) 6 hours 30 minutes (b) 4 hours (c) 36 hours 30 minutes / 36 ½ hours (d) Clock A shows 8.30am (e) Clock B shows 11.45am (f) Clock C shows 7.15pm 8. 15:15hrs / 3.15pm 9. (a) Clock shows 9.30am (b) 12.15pm/ 12:15 hrs 10. 18 sums</p>
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Unit 17: Triangles

Errata: NIL

Mental test:

1. $x=30^\circ$ $x=100^\circ$
2. 60°
3. 18cm
4. $x=90^\circ$ $y=50^\circ$ $z=140^\circ$
5. Right-angled triangle/ Isosceles triangle
6. a) true b) false c) true
7. 8 triangles
8. 8.4
9. Draw a) an equilateral, b) a scalene, c) an isosceles triangle
10. Form an equilateral triangle and shade $\frac{1}{6}$ of the shape

Problems:

1. $x=50^\circ$ $y=65^\circ$
2. 25cm^2
3. Draw tri: $AB = 57\text{mm}$, $BC = 60\text{mm}$, $ABC = 85^\circ$
4. (a) 25° (b) 20° (c) 145°
5. Draw triangles: (a) Equilateral (b) Isosceles
6. (a) 32° (b) acute (c) right-angled
7. (a) perimeter $ABC = 142\text{mm} = 14.2\text{cm}$
(b) $BCD = 28^\circ$, $BDC = 90^\circ$, $CBD = 62^\circ$
8. (a) Scalene (b) 14cm (c) $D = 50^\circ$ (d) 3cm
(e) Isosceles (f) 15cm (g) 60°
9. (a) 18cm (b) 18cm^2
10. (a) ACB or AEB or AEC (b) ADC
(c) ADE or ABD+

Unit 18: Vulgar Fractions

Errata: NIL

Mental test:

1. $\frac{1}{4}$
2. $\frac{4}{5}$
3. 30 apples
4. $\frac{1}{4}$
5. 64
6. 360 Italian passengers
7. $\frac{3}{4} = 0.75$, $\frac{3}{5} = 0.6$, $\frac{1}{5} = 0.2$
8. 20 roses
9. proper fractions
10. mixed numbers

Problems:

1. (a) 196 British, (b) 196 French (c) $\frac{2}{5}$
2. (a) 40 green (b) $\frac{1}{5}$ (c) 12 red
3. (a) 11 laps (b) 3.68km (c) 0.72km
4. $\frac{3}{5}$
5. (a) 184 muffins (b) 168 coconut balls
6. $A = \frac{1}{8}$, $B = \frac{1}{8}$, $C = \frac{1}{8}$, $D = \frac{1}{8}$, $E = \frac{1}{4}$, $F = \frac{1}{4}$
7. (a) €50 (b) €25
8. Shade 1 part of the triangle, 8 parts of the octagon and $1\frac{1}{2}$ parts of the circle.
9. (a) $\frac{2}{5}$ (b) 30 red marbles (c) 42 brown marbles
(d) 48 yellow marbles
10. (a) 200 litres (b) 80 litres (c) 100 litres

Unit 19: Measuring Weight	
Errata: NIL	
<p>Mental Test:</p> <ol style="list-style-type: none"> 2.08kgs 1500g or 1.5kg 2.55kg 90kg 1780g or 1.78kg 6.5kg or 6 ½ kg or 6kg 500g 200g 8.452g €1 20 packets 	<p>Problems:</p> <ol style="list-style-type: none"> (a) 600g = 0.6kg (b) 900g = 0.9kg (a) orange = 200g, (b) chair = 8kg (c) man = 90kgs (a) A = 200g, (b) B = 500g, (c) C = 650g, (d) D = 1 kg 350g or 1.35kg or 1350g, (e) 850g (a) 10kg, (b) 0.4kg or 400g (a) 90 minutes or 1.5hrs or 1 ½ hrs (b) 45 minutes (c) 6kgs (d) 5kgs (a) 2060g or 2.06kg (b) empty bag weighs 940g (a) d (b) 8.9kg (c) a (d) 6.3kg (e) 2.6kg (a) 2.58kg (b) 1.72kg (c) 0.5kg or 500g (a) 1kg (b) 80kg (c) 40g (d) 120g (a) 75kg (b) 15kg (c) 7.5kg