

MTH/SLS 218 Syllabus

CSI, Dept of Math  
Spring 2008

Text: Mathematics for Elementary Teachers (with Activities),  
2nd Ed, Beckmann, 2008, Pearson

Day	Topics	Reading (AC=Activity)	Practice Probs Sec) prob #s	Problems Sec) prob #s
1a	Introduction. Preview: folding patterns. Review: explaining solutions.	8.1, AC 8A 1.2	8.1) 1, 2	8.1) 1, 3a
1b	Angles and rotation. Angles for intersecting and parallel lines	8.2 (395-401)	8.2) 2-5, 8, 9	8.2) 3, 5, 6
2a	Angle sum of a triangle. Distance and circles.	AC: 8J, L 8.3	8.3) 1-4	8.3) 1-4
2b	Definitions: polygons, triangles, quads. Triangle and rhombus construction, with compass and ruler.	8.4 (423-26)	8.4) 1 8.4) 2-4	8.4) 2, 4, 5, 6, 8
3a	Quadrilaterals: definitions vs properties. Relationships and Venn diagrams.	8.4 (427-30)	8.4) 5-8	8.4) 3, 9, 13, 14
3b	Prisms and pyramids; folding patterns; faces, vertices, edges.	8.6	8.6) 1-4	8.6) 5, 6, 10, 11, 12
4a	<b>Review</b>			
4b	<b>Test 1</b>			
5a	Measurement and units; dimension. Area and volume by multiplication; perimeter and area of rectangles.	10.1, 10.2 5.3, 5.4 10.3	10.1) 1-4, 9 5.3) 1; 5.4) 1	10.1) 2, 3 5.3) 1, 2; 5.4) 1 10.3) 1, 2, 3
5b	Surface area and volume of a box Rounding and accuracy.	(10.2, 10.3) 2.5, 10.4	10.2) 1 2.5) 1-4; 10.4) 2, 3	10.3) 6, 7 2.5) 5; 10.4) 3, 4
6a	Unit conversion: concepts and methods.	10.5	10.5) 1, 2abef	10.5) 1, 2, 4, 7, 9
6b	Unit conversion: area and volume.	(10.5)	10.5) 2cd, 3, 4, 6, 7	10.5) 11, 13, 14, 15, 22
7a	Finding area by cutting and pasting.	11.1	11.1) 2, 3, 5, 6	11.1) 3, 5, 7, 12, 14
7b	Pythagorean Theorem; applications.	11.2	11.2) 1-4, 8	11.2) 3, 4, 5, 6
8a	<b>Review</b>			
8b	<b>Test 2</b>			
9a	Area of triangles and parallelograms. Surface area of pyramids (and prisms). Finding area by shearing.	11.3, 11.4 11.5, AC: 11L, O	11.3) 1-3; 11.4) 1, 4 11.5) 1, 2	11.3) 2, 5, 7, 12, 15 11.5) 3, 4
9b	Circles: circumference, pi, area. Surface area of cylinders and cones.	11.6, AC 11R	11.6) 2, 3, 5, 6, 8	11.6) 6, 7, 8, 15
10a	Random sampling. "Dot plots" (frequency graphs)	14.1 14.2 (p791)	14.1) 2, 3 14.2) 1	14.1) 5, 6, 7
10b	Data display. Mean and median.	14.2 14.3	14.2) 2, 3 14.3) 1-6	14.2) 4a, 6 14.3) 4, 6, 8, 12
11a	Mean and median: further problems.	(14.3)	14.3) 7, 8	14.3) 2, 7, 11, 14ab
11b	Probability; listing outcomes. Review: arrays, tree diagrams	15.1 5.1	15.1) 1-4	15.1) 1, 3, 4, 6, 9
12a	Probability: sampling problems.	(15.1)		15.1) 10, 12, 13, 17, 18
12b	Probability by fraction multiplication. Fraction multiplication review.	15.2 6.1	15.2) 1	15.2) 2, 4, 6, 14
13a	<b>Review</b>			
13b	<b>Test 3</b>			
14a	<b>Review</b>			
14b	<b>Review</b>			
15	<b>Final Exam</b>			

\*Syllabus subject to change.

\*All problems require explanation, as illustrated in Practice Problems.