Solutions sheet No. 119					Cosine Rule - Find an Angle 1			
Working using $cosA = \dfrac{b^2 + c^2 - a^2}{2bc}$								
No.	a	b	c	Angle	**Equation**	Calculator	Degrees	Solution
1	6	7	8	a	$\cos a° = (7² + 8² - 6²)/(2×7×8)$	46.567463	47°	$a° = 47°$
2	10	12	13	b	$\cos b° = (12² + 13² - 10²)/(2×12×13)$	46.945611	47°	$b° = 47°$
3	24	20	25	c	$\cos c° = (20² + 25² - 24²)/(2×20×25)$	63.320457	63°	$c° = 63°$
4	28	15	25	d	$\cos d° = (15² + 25² - 28²)/(2×15×25)$	84.951441	85°	$d° = 85°$
5	60	85	90	e	$\cos e° = (85² + 90² - 60²)/(2×85×90)$	39.97366	40°	$e° = 40°$
6	6	10	11	f	$\cos f° = (10² + 11² - 6²)/(2×10×11)$	32.763758	33°	$f° = 33°$
7	20	18	26	g	$\cos g° = (18² + 26² - 20²)/(2×18×26)$	50.131658	50°	$g° = 50°$
8	40	30	42	h	$\cos h° = (30² + 42² - 40²)/(2×30×42)$	65.025035	65°	$h° = 65°$
9	25	20	35	i	$\cos i° = (20² + 35² - 25²)/(2×20×35)$	44.415309	44°	$i° = 44°$
10	45	30	38	j	$\cos j° = (30² + 38² - 45²)/(2×30×38)$	81.95723	82°	$j° = 82°$
11	4.5	2.5	3	k	$\cos k° = (2.5² + 3² - 4.5²)/(2×2.5×3)$	109.47122	109°	$k° = 109°$
12	11.5	13.5	15	l	$\cos l° = (13.5² + 15² - 11.5²)/(2×13.5×15)$	47.233488	47°	$l° = 47°$
13	30	35	40	m	$\cos m° = (35² + 40² - 30²)/(2×35×40)$	46.567463	47°	$m° = 47°$
14	5.8	7.5	7.9	n	$\cos n° = (7.5² + 7.9² - 5.8²)/(2×7.5×7.9)$	44.154143	44°	$n° = 44°$
15	150	100	120	p	$\cos p° = (100² + 120² - 150²)/(2×100×120)$	85.459333	85°	$p° = 85°$
16	65	110	120	q	$\cos q° = (110² + 120² - 65²)/(2×110×120)$	32.461745	32°	$q° = 32°$
17	7.2	8.6	9.4	r	$\cos r° = (8.6² + 9.4² - 7.2²)/(2×8.6×9.4)$	46.895973	47°	$r° = 47°$
18	30	20	25	s	$\cos s° = (20² + 25² - 30²)/(2×20×25)$	82.819244	83°	$s° = 83°$
19	4.5	4.8	5.2	t	$\cos t° = (4.8² + 5.2² - 4.5²)/(2×4.8×5.2)$	53.304935	53°	$t° = 53°$
20	7.1	5.3	7.4	u	$\cos u° = (5.3² + 7.4² - 7.1²)/(2×5.3×7.4)$	65.571051	66°	$u° = 66°$