

Wando High School Math Competition Precalculus Team Questions

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- 1) $\frac{1}{4}$
 2) $1 + \sqrt{3}$
 3) $\frac{-3}{2}$ (a=3, b=5, c=12)
 4) 5
 5) $\frac{1}{8}$
 6) -1
 7) $6 - 4\sqrt{2}$
 8) $[2,5) \cup (5,10)$

9) $k = \frac{10\sqrt{3}}{3}$

10)

10	-	1	x	4	=	10	÷	2	+	1
2	x	1	÷	2	-	4	+	10	=	7
12	÷	2	=	1	+	3	x	2	-	1
3	+	11	-	6	÷	3	=	3	x	4
8	=	3	+	5	x	2	-	10	÷	2

11) -5 (A=2, B= $\frac{-2}{5}$)

12) 132

13) For 5 integers 2, 4, 6, 12 . For 10 integers 2, 4, 8, 16, 32, 64, 128, 256, 384, 768

14) 10

15) a) $(x^2 - x + 1)(x^2 + x + 1)$

b) $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{7\pi}{2}, \frac{11\pi}{2}$

c) $a = \frac{3\sqrt{2}}{2}, b = \ln(\sqrt{2})$

d) $\frac{\pi}{2}$