

NAME _____

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See due date on Website Syllabus

ANSWER ON THIS PAGE ONLY

1. What is the Bravais lattice for this crystal? ANS _____
2. What is Z equal to for this crystal? ANS _____
3. How many imaginary lattice points are in this crystal unit cell? ANS _____
4. How many atoms are in this unit cell? ANS _____

Data Table 12: FeB (25)

Orthorhombic, space group Pbnm, No. 62; $a = 4.053\text{\AA}$, $b = 5.495$, $c = 2.946\text{\AA}$; $Z =$ _____ $V = 65.61\text{\AA}^3$ *Atomic Positions:*Fe in 4(c): $\pm(x, y, 1/4; 1/2-x, 1/2+x, 1/4)$; $x=0.125$, $y=0.180$ B in 4(c): $x=0.61$, $y=0.04$