

Review Packet Answer Key

Bonding (Topic 6 in your review book)

Practice Questions

- | | |
|------|-------|
| 1. 3 | 7. 1 |
| 2. 2 | 8. 1 |
| 3. 1 | 9. 2 |
| 4. 1 | 10. 2 |
| 5. 2 | 11. 4 |
| 6. 3 | 12. 4 |

Bonding Review – questions from previous Regents exams

- | | |
|------|-------|
| 1. 2 | 10. 2 |
| 2. 4 | 11. 4 |
| 3. 2 | 12. 3 |
| 4. 2 | 13. 1 |
| 5. 3 | 14. 3 |
| 6. 3 | 15. 1 |
| 7. 4 | 16. 2 |
| 8. 2 | 17. 4 |
| 9. 3 | 18. 1 |

19. The P-Cl bond is more polar than the P-S bond because the electronegativity difference between P and Cl is 1.0, whereas it is only 0.6 between P and S. The greater the electronegativity difference, the more polar the bond.
20. The boiling point of octane according to the graph is about **125°C**.
21. The relationship is as the **molar mass increases**, the **strength of the intermolecular forces between molecules also increases**.
22. **AQ₂**
23. The bonds between nonmetals is always **covalent**.
24. The total mass before and after a reaction is always the **same** due to conservation of mass.
25. Methane is a nonpolar molecule because the **electrons are spread out evenly** in the molecule.
26. The boiling point of water under 90 kPa of atmospheric pressure is **97°C**.
27. The graph of temperature vs. surface tension is linear, and sloping negatively
28. At 60°C, one can read the graph, and or interpolate from the data, to estimate the surface tension value to be about **65 mN/m**
29. As temperature increases, the surface tension decreases.
30. The lower surface tension value for CCl₄ indicates that the intermolecular forces between CCl₄ molecules are weaker than those between H₂O molecules.

