1. $\boxed{18\pi}$

2. $\boxed{90^\circ}$

3. $\boxed{\frac{1}{64}}$

4. $\boxed{30}$

5. $\boxed{108\pi}$

6. $\boxed{8}$

7. $\boxed{\frac{3\pi}{4}}$

8. $\boxed{35^\circ}$

9. $\boxed{4:1}$

10. $\overline{AB}$ is drawn below and we will use $\triangle ABC$, which is a right triangle, to find AB.

    We get $BC = 1$ since B is a midpoint of the edge of length 2. It remains to find AC and to use Pythagorean Theorem to get AB.

    $\overline{AC}$ is the hypotenuse of a right triangle with legs length 2 and 1 (the edge of the cube and half the edge of the cube). This gives us $AC = \sqrt{2^1 + 1^2} = \sqrt{5}$.

    Now we must use Pythagorean Theorem to find $AB = \sqrt{(\sqrt{5})^2 + 1^2} = \boxed{\sqrt{6}}$.