

1. A:  $4\sqrt{3}$   
B:  $\frac{12}{16\pi}$   
C:  $\frac{3}{4\pi}$   
D:  $\frac{4\pi}{3}$   
FINAL: 20
2. A: 210  
B: 10  
C: 16  
D: 25  
FINAL: 2,500
3. A:  $16\pi$   
B:  $32\pi$   
C:  $16\pi + 16$   
D: 16  
FINAL:  $64\pi + 32$
4. A: 52.5 or  $\frac{105}{2}$   
B: 327.5 or  $\frac{655}{2}$   
C: 127  
D: 185.5 or  $\frac{371}{2}$   
FINAL: 692.5 or  $\frac{1,385}{2}$
5. A: 2  
B: 8  
C: 12  
D:  $2\sqrt{5}$   
FINAL:  $192 + 2\sqrt{5}$
6. 1: True  
2: False  
3: True  
4: False  
5: True  
6: True  
FINAL: 9
7. A: 60  
B: 120  
C: 6  
FINAL: 1,200
8. A:  $2^{2020}(3 + 2\sqrt{2})\pi$   
B:  $2^{2020}(3 - 2\sqrt{2})\pi$   
C: 4  
D:  $\sqrt{101} - 7$   
FINAL:  $14 + 12\sqrt{2} + \sqrt{101}$
9. A: 907,200  
B: 60  
C: 24  
D: 0.275 or  $\frac{11}{40}$   
FINAL: 15,186

10. A: 15  
B:  $\sqrt{576 + 288\sqrt{2}}$   
C:  $6\sqrt{5}$   
D: 28  
FINAL:  $855 + 288\sqrt{2}$
11. A:  $\frac{17}{3}$   
B: 11  
C:  $\frac{5\sqrt{5}}{4}$   
FINAL:  $\frac{935\sqrt{5}}{12}$
12. A: 10  
B:  $50 + 50\sqrt{2}$   
C: 7.5 or  $\frac{15}{2}$   
D:  $56\pi$   
FINAL:  $95 + 56\pi + 50\sqrt{2}$
13. A:  $\frac{\sqrt{2}}{2}$   
B:  $\frac{\sqrt{2} - \sqrt{6}}{4}$   
C: -0.8  
D:  $2\sqrt{6}$   
FINAL:  $\frac{29\sqrt{6}}{20}$
14. A: 15,288  
B: 6  
C: 121  
FINAL: 14,562