

## Solutions:

1. a)  $\frac{125}{6}$

b) 8

c)  $\frac{32}{3}$

d)  $\frac{3\pi^2}{8} - 1$

e)  $\frac{64}{3}$

2. a)  $\frac{256\pi}{35}$

b)  $\frac{16\pi}{5}$

c)  $\frac{16\pi}{5}$

d)  $\frac{88\pi}{15}$

3.  $64\pi$

4.  $\frac{128\pi}{3}$