解答

1. 立体の体積と表面積（回転） 2

(1) $S = 220\pi\text{cm}^2 \ \ (690.8\text{cm}^2)$

(2) $S = 210\pi\text{cm}^2 \ \ (659.4\text{cm}^2)$

(3) $V = \dfrac{16}{3}\pi\text{cm}^3$
$S = 12\pi\text{cm}^2 \ \ (37.68\text{cm}^2)$

2. 立体の体積と表面積（回転） 2

(1) $S = 240\pi\text{cm}^2 \ \ (753.6\text{cm}^2)$

(2) $S = 119\pi\text{cm}^2 \ \ (373.66\text{cm}^2)$

(3) $V = \dfrac{16}{3}\pi\text{cm}^3$
$S = 12\pi\text{cm}^2 \ \ (37.68\text{cm}^2)$

3. 立体の体積と表面積（回転） 2

(1) $S = 144\pi\text{cm}^2 \ \ (452.16\text{cm}^2)$

(2) $S = 230\pi\text{cm}^2 \ \ (722.2\text{cm}^2)$

(3) $V = \dfrac{500}{3}\pi\text{cm}^3$
$S = 100\pi\text{cm}^2 \ \ (314\text{cm}^2)$

4. 立体の体積と表面積（回転） 2

(1) $S = 24\pi\text{cm}^2 \ \ (75.36\text{cm}^2)$

(2) $V = 288\pi\text{cm}^3 \ \ (904.32\text{cm}^3)$
$S = 144\pi\text{cm}^2 \ \ (452.16\text{cm}^2)$

(3) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

5. 立体の体積と表面積（回転） 2

(1) $S = 312\pi\text{cm}^2 \ \ (979.68\text{cm}^2)$

(2) $S = 112\pi\text{cm}^2 \ \ (351.68\text{cm}^2)$

(3) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

6. 立体の体積と表面積（回転） 2

(1) $S = 210\pi\text{cm}^2 \ \ (659.4\text{cm}^2)$

(2) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

(3) $V = \dfrac{500}{3}\pi\text{cm}^3$
$S = 100\pi\text{cm}^2 \ \ (314\text{cm}^2)$

7. 立体の体積と表面積（回転） 2

(1) $S = 102\pi\text{cm}^2 \ \ (320.28\text{cm}^2)$

(2) $V = \dfrac{16}{3}\pi\text{cm}^3$
$S = 12\pi\text{cm}^2 \ \ (37.68\text{cm}^2)$

(3) $V = \dfrac{250}{3}\pi\text{cm}^3$
$S = 75\pi\text{cm}^2 \ \ (235.5\text{cm}^2)$

8. 立体の体積と表面積（回転） 2

(1) $S = 207\pi\text{cm}^2 \ \ (649.98\text{cm}^2)$

(2) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

(3) $V = \dfrac{500}{3}\pi\text{cm}^3$
$S = 100\pi\text{cm}^2 \ \ (314\text{cm}^2)$

9. 立体の体積と表面積（回転） 2

(1) $S = 275\pi\text{cm}^2 \ \ (863.5\text{cm}^2)$

(2) $S = 184\pi\text{cm}^2 \ \ (577.76\text{cm}^2)$

(3) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

10. 立体の体積と表面積（回転） 2

(1) $S = 70\pi\text{cm}^2 \ \ (219.8\text{cm}^2)$

(2) $V = \dfrac{250}{3}\pi\text{cm}^3$
$S = 75\pi\text{cm}^2 \ \ (235.5\text{cm}^2)$

(3) $V = \dfrac{128}{3}\pi\text{cm}^3$
$S = 48\pi\text{cm}^2 \ \ (150.72\text{cm}^2)$

11. 立体の体積と表面積（回転） 2

(1) $S = 312\pi\text{cm}^2 \ \ (979.68\text{cm}^2)$

(2) $S = 80\pi\text{cm}^2 \ \ (251.2\text{cm}^2)$

(3) $V = 36\pi\text{cm}^3 \ \ (113.04\text{cm}^3)$
$S = 36\pi\text{cm}^2 \ \ (113.04\text{cm}^2)$

12. 立体の体積と表面積（回転） 2

(1) $S = 324\pi\text{cm}^2 \ \ (1017.36\text{cm}^2)$

(2) $S = 136\pi\text{cm}^2 \ \ (427.04\text{cm}^2)$

(3) $V = 18\pi\text{cm}^3 \ \ (56.52\text{cm}^3)$
$S = 27\pi\text{cm}^2 \ \ (84.78\text{cm}^2)$

13. 立体の体積と表面積（回転） 2

(1) $S = 168\pi\text{cm}^2 \ \ (527.52\text{cm}^2)$

(2) $V = \dfrac{500}{3}\pi\text{cm}^3$
$S = 100\pi\text{cm}^2 \ \ (314\text{cm}^2)$

(3) $V = \dfrac{250}{3}\pi\text{cm}^3$
$S = 75\pi\text{cm}^2 \ \ (235.5\text{cm}^2)$

14. 立体の体積と表面積（回転） 2

(1) $S = 144\pi\text{cm}^2 \ \ (452.16\text{cm}^2)$

(2) $V = \dfrac{500}{3}\pi\text{cm}^3$
$S = 100\pi\text{cm}^2 \ \ (314\text{cm}^2)$

(3) $V = \dfrac{250}{3}\pi\text{cm}^3$
$S = 75\pi\text{cm}^2 \ \ (235.5\text{cm}^2)$

15. 立体の体積と表面積（回転） 2

(1) $S = 12\pi\text{cm}^2 \ \ (37.68\text{cm}^2)$

(2) $S = 48\pi\text{cm}^2 \ \ (150.72\text{cm}^2)$

(3) $V = 36\pi\text{cm}^3 \ \ (113.04\text{cm}^3)$
$S = 36\pi\text{cm}^2 \ \ (113.04\text{cm}^2)$

16. 立体の体積と表面積（回転） 2

(1) $S = 207\pi\text{cm}^2 \ \ (649.98\text{cm}^2)$

(2) $V = 144\pi\text{cm}^3 \ \ (452.16\text{cm}^3)$
$S = 108\pi\text{cm}^2 \ \ (339.12\text{cm}^2)$

(3) $V = 288\pi\text{cm}^3 \ \ (904.32\text{cm}^3)$
$S = 144\pi\text{cm}^2 \ \ (452.16\text{cm}^2)$