Answer:

Correct Answer: (A) √(52) units

Explanation:

$$\text{Distance} = \sqrt{(3-(-3))^2 + (-2-2)^2}$$
$$= \sqrt{(3+3)^2 + (-4)^2}$$
$$= \sqrt{36+16}$$
$$= \sqrt{52}$$

3. $8\cot^2 A - 8\,\text{cosec}^2 A$ equal to

(A) 8

(B) $\frac{1}{8}$

(C) -8

(D) $-\frac{1}{8}$

Answer:

Correct Answer: (C) -8

Explanation:

$$8\cot^2 A - 8\,\text{cosec}^2 A$$
$$= 8(\cot^2 A - \text{cosec}^2 A)$$
$$= 8 \times -1$$
$$= -8$$

4. The total surface area of a frustum-shaped glass tumbler is ($r_1 > r_2$)

(A) $\pi r_1 l + \pi r_2 l$

(B) $\pi l(r_1 + r_2) + \pi r_2^2$

(C) $\frac{1}{3}\pi h(r_1^2 + r_2^2 + r_1 r_2)$

(D) $\sqrt{h^2 + (r_1 - r_2)^2}$

Answer:

Correct Answer: (C) $\frac{1}{3}\pi h(r_1^2 + r_2^2 + r_1 r_2)$

Explanation:

The total surface area of a frustum-shaped glass tumbler is $\frac{1}{3}\pi h(r_1^2 + r_2^2 + r_1 r_2)$ where radii $r_1 > r_2$.

5. 120 can be expressed as a product of its prime factors as

(A) $5 \times 8 \times 3$

(B) 15×2^3

(C) $10 \times 2^2 \times 3$

(D) $5 \times 2^3 \times 3$

Answer:

Correct Answer: (D) $5 \times 2^3 \times 3$

Explanation:

$120 = 20 \times 6$

$= 5 \times 4 \times 2 \times 3$

$= 5 \times 2^3 \times 3$