

Multiplying Monomial and Trinomial

Word Problems

- ① A triangle has a base of $x^2 + 3x + 3$ units and a height of $8y^2$ units. Find its area.
- ② A cuboid has a length of $(m^3 + 5 + 4m)$ units, a width of $5m^4$ units, and a height of n^2 units. Calculate its volume and surface area.
- ③ Determine the area of a parallelogram whose base and height are $3q^5 - 2p^3q^4 - 2p^4q$ units and $7p^2q^2$ units, respectively.
- ④ If a rectangle has a length of $2d^2 + 12d + 3$ units and a width of d^3 units, what is the area?
- ⑤ A rectangular prism has dimensions of $z + 8$, $3z$, and $4(z - 2)$ units. Find its volume.

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Answers

- ① A triangle has a base of $x^2 + 3x + 3$ units and a height of $8y^2$ units. Find its area.

$(4x^2y^2 + 12xy^2 + 12)$ sq. units.

- ② A cuboid has a length of $(m^3 + 5 + 4m)$ units, a width of $5m^4$ units, and a height of n^2 units. Calculate its volume and surface area.

$(5m^7n^2 + 25m^4n^2 + 20m^5n^2)$ cubic units and $(10m^7 + 40m^5 + 50m^4 + 10m^4n^2 + 2m^3n^2 + 8mn^2 + 10n^2)$ sq. units.

- ③ Determine the area of a parallelogram whose base and height are $3q^5 - 2p^3q^4 - 2p^4q$ units and $7p^2q^2$ units, respectively.

$(21p^2q^7 - 14p^5q^6 - 14p^6q^3)$ sq. units.

- ④ If a rectangle has a length of $2d^2 + 12d + 3$ units and a width of d^3 units, what is the area?

$(2d^5 + 12d^4 + 3d^3)$ sq. units.

- ⑤ A rectangular prism has dimensions of $z + 8$, $3z$, and $4(z - 2)$ units. Find its volume.

$(12z^3 + 72z^2 - 192z)$ cubic units.