

WHEN IN DOUBT, EXPAND IT OUT!

Simplify.

3. $(-5x^2y)(3x^4)$

$$\underline{-15x^6y}$$

5. $(3cd^4)(-2c^2)$

$$\underline{-6c^3d^4}$$

7. $(-15xy^4)\left(-\frac{1}{3}xy^3\right)$

$$\underline{5x^2y^7}$$

9. $(-18m^2n)^2\left(-\frac{1}{6}mn^2\right)$

$$(-18)^2 m^4 n^2 \cdot -\frac{1}{6} mn^2$$

$$\underline{54m^5n^4}$$

11. $\left(\frac{2}{3}p\right)^2$

$$\underline{\frac{4}{9}p^2}$$

13. $(0.4k^3)^3$

$$\underline{0.064k^9}$$

4. $(2ab^2c^2)(4a^3b^2c^2)$

$$\underline{8a^4b^4c^4}$$

6. $(4g^3h)(-2g^5)$

$$\underline{-8g^8h}$$

8. $(-xy)^3(xz)$

$$-x^3y^3 \cdot xz$$

$$\underline{-x^4y^3z}$$

10. $(0.2a^2b^3)^2$

$$\underline{0.04a^4b^6}$$

12. $\left(\frac{1}{4}cd^3\right)^2$

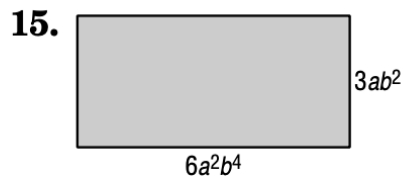
$$\underline{\frac{c^2d^6}{16}}$$

14. $[(4^2)^2]^2$

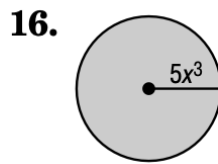
$$\underline{4^8 = 65536}$$

Using the MCAS Reference Sheet, find the areas and volumes of the following figures. **Always write the formula you will be using first before substituting in values.** Use 3.14 for the value of π .

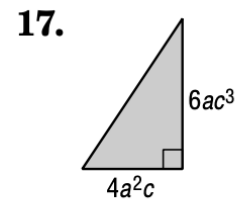
GEOMETRY Express the area of each figure as a monomial.



$$\begin{aligned} A &= L \cdot w \\ &= 6a^2b^4 \cdot 3ab^2 \\ &= 18a^3b^6 \end{aligned}$$



$$\begin{aligned} A &= \pi r^2 \\ &= \pi (5x^3)^2 \\ &= \pi (25x^6) \\ &= 78.5x^6 \end{aligned}$$

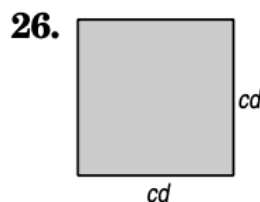


$$\begin{aligned} A &= \frac{1}{2} b \cdot h \\ &= \frac{1}{2} \cdot 4a^2c \cdot 6ac^3 \\ &= 12a^3c^4 \end{aligned}$$

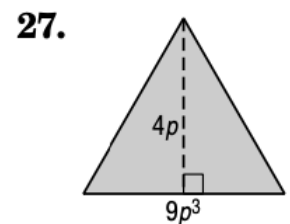
GEOMETRY Express the area of each figure as a monomial.



$$\begin{aligned} A &= L \cdot w \\ &= x^5 \cdot x^2 \\ &= x^7 \end{aligned}$$

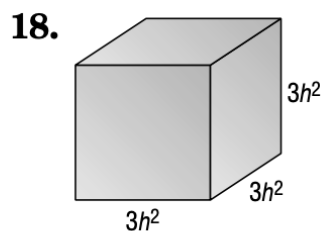


$$\begin{aligned} A &= s^2 \\ &= (cd)^2 \\ &= c^2d^2 \end{aligned}$$

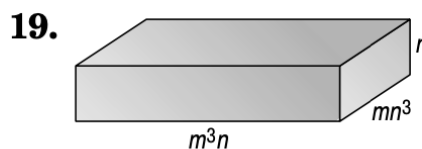


$$\begin{aligned} A &= \frac{1}{2} b \cdot h \\ &= \frac{1}{2} \cdot 4p \cdot 9p^3 \\ &= 18p^4 \end{aligned}$$

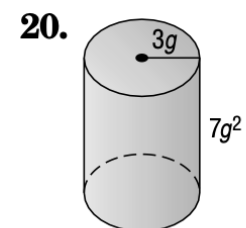
GEOMETRY Express the volume of each solid as a monomial.



$$\begin{aligned} V &= B \cdot h \\ &= L \cdot w \cdot h \\ &= 3h^2 \cdot 3h^2 \cdot 3h^2 \\ &= 27h^6 \end{aligned}$$



$$\begin{aligned} V &= L \cdot w \cdot h \\ &= m^3n \cdot mn^3 \cdot n \\ &= m^4n^5 \end{aligned}$$



$$\begin{aligned} V &= \pi r^2 h \\ &= \pi (3g)^2 \cdot 7g^2 \\ &= \pi (9g^2) \cdot 7g^2 \\ &= 197.82g^4 \end{aligned}$$