

Answer on Question #43647 – Math – Algebra

factorize : $8a^3 - 2a$

Solution.

Factor the following:

$$8a^3 - 2a$$

Factor common terms out of $8a^3 - 2a$.

Factor $2a$ out of $8a^3 - 2a$:

$$2a(4a^2 - 1)$$

Express $4a^2 - 1$ as a difference of squares.

$$4a^2 - 1 = (2a)^2 - 1^2:$$

$$2a \boxed{(2a)^2 - 1^2}$$

Factor the difference of two squares.

Factor the difference of two squares. $(2a)^2 - 1^2 = (2a - 1)(2a + 1)$:

Answer:

$$2a \boxed{(2a - 1)(2a + 1)}$$