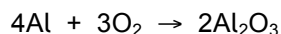




- 1 Calculate the mass of aluminium oxide that would be formed when 2.70 g of aluminium reacts with 2.56 g of oxygen. Give your answer to the appropriate number of significant figures.



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(4)

- 2 Calculate the pressure exerted by 8.00 g of oxygen gas in a container of volume 205 cm<sup>3</sup> at 37°C. Give your answer to the appropriate number of significant figures.

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(4)

- 3 Write an ionic equation, including state symbols, for each of the following reactions.

a reaction of aqueous potassium carbonate solution with nitric acid

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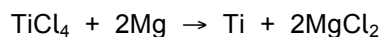
(2)

b precipitation of lead(II) iodide when aqueous lead(II) nitrate is mixed with aqueous potassium iodide

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(2)

- 4 Calculate the atom economy when titanium is extracted from titanium chloride.



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(2)