Do Now

How many atoms are there in 0.0383 g of potassium?

$$\frac{0.0383 \text{ g}}{} \left| \frac{1 \text{ mol}}{39.0983 \text{ g}} \right| \frac{6.02 \times 10^{23} \text{ atoms}}{1 \text{ mole}} = 5.89708 \times 10^{20} \text{ atoms}$$

$$5.90 \times 10^{20} \text{ atoms}$$

0406 – HW

1) What is the mass of 6.02×10^{24} atoms of Bi?

2.09 x 10^3 g Bi

2) How many moles in 1.25×10^3 g of Zn?

1.91 x 10^1 mol Zn

3) What is the mass of 3.54×10^2 mol of Co?

2.09 x 10^4 g Co

4) How many atoms in 4.56×10^3 g of Si?

9.77 x 10^{25} atoms of Si

0406 - HW

5) How many atoms in 0.120 kg of Ti?

$$1.51 \times 10^{24} \text{ atoms Ti}$$

6) How many moles in 1.00 kg of Fe?

$$1.79 \times 10^{1} \text{ mol Fe}$$

7) What is the mass of 2.45×10^{-2} mol of Zn?

$$1.60 \text{ g Zn}$$

8) What is the mass of 1.00×10^{24} atoms of Mn?

$$91.3 \text{ g Mn}$$