Worksheet 2015-9ℰB-00003(2)

(1) Simplify (without a calculator):
Write the answers as positive exponents!

(a) $\dfrac{(0{,}5)^{3x} \times (4)^{2x}}{\sqrt{16x^8}}$

(b) $\dfrac{8^{3m-1} \times 4^{1-2m}}{32^m}$

(c) $\sqrt{\dfrac{0{,}09}{0{,}81} \div \sqrt[3]{64}}$

(d) $\sqrt[x]{x^{5x}} + 2(x^2)^3$

(2) Solve x:

(a) $-2x^{\frac{1}{2}} = -18$

(b) $3^{2x+1}.27^2 = 9^{1-x}.3$

(3) Simplify and write the answer in scientific notation: (Without a calculator.)

(a) $(1{,}44 \times 10^3) \div (1{,}2 \times 10^{-2})$

(b) $(4{,}0 \times 10^2)^3$