DIVISIBILITY, INTEGERS, POWERS AND ROOTS TEST - 2° ESO

Exercise 1: (1.5 points) Work out

a) lcm (52, 40) =

b) hcf (120, 144) =

c) hcf (30, 49) =

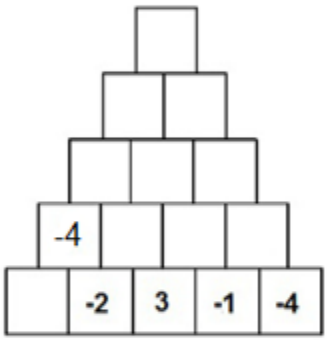
Exercise 2: (0.75 points) Tours for Cazorla leave every thirty minutes and tours for Castril every forty five minutes. When do the tours leave at the same time?

Exercise 3: (1.5 points) Work out the value of the following expressions:

a) $2+3\sqrt{49}-(\sqrt{36}:2)^2+1-2\cdot(8-5)^2-1^{29}=$

b) $3-(-5)\cdot(-2)+\sqrt{12+4}:(-2)+6\cdot 2^2-2^4=$

Exercise 4: (1 point) Complete this addition pyramid. The number in each brick is found by adding the two directly below it.



Exercise 5: (2.25 points) Work out the value of the following expressions:

a) $7^6:(7^4\cdot 7)=$

b) $(5^{12}:5^7):(5^2\cdot 5^3)=$

c) $(y^7\cdot y^{-2}):(y^{-3}\cdot y^{-5})=$

d) $(5^3)^{-5}:(5\cdot 5^4)^3=$

e) $(42^8:7^8):(3^4\cdot 2^4)=$

Exercise 6: (2 points) Work out the value of the following expressions:

a) $\dfrac{a^3\cdot a\cdot b^{-5}}{a^{-2}\cdot b^6}=$

b) $-2^4=$

c) $(-3)^3=$

d) $\dfrac{15^3\cdot 3^7\cdot 5^{-4}}{5^{-2}\cdot(3^2)^3}=$

e) $(-5)^{-2}=$

f) $\left(\dfrac{3}{4}\right)^{-3}=$

Exercise 7: (1 point) Work out:

a) $\sqrt{49\,000\,000\,000\,000}=$

b) $\sqrt[3]{5^{12}\cdot 3^6\cdot 2^{15}}=$

c) $\sqrt[4]{625\,000\,000\,000\,000}=$