Worksheet

05/07/2020

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Problem quickname: 2001

1)

Quick: 2001

Determine the greatest common divisor (GCD). Use the Euclidean Algorithm and write down the computational steps in detail.

a) Number 1: 24, Number 2: 28. Determine the larger number of these: 28.

Round 1:

Determine the quotient and remainder of 28 : 24.

We have $28 = 1 \cdot 24 + 4$, so the quotient is 1, the remainder is 4.

Now select the divisor 24 of this round as new dividend and the remainder 4 as new divisor.

Round 2:

Determine the quotient and remainder of 24 : 4.

We have $24 = 6 \cdot 4 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 4 ist also the GCD, so we have gcd(28,24)=4.

b) Number 1: 77, Number 2: 55. Determine the larger number of these: 77.

Round 1:

Determine the quotient and remainder of 77 : 55.

We have $77 = 1 \cdot 55 + 22$, so the quotient is 1, the remainder is 22.

Now select the divisor 55 of this round as new dividend and the remainder 22 as new divisor.

Round 2:

Determine the quotient and remainder of 55 : 22.

We have $55 = 2 \cdot 22 + 11$, so the quotient is 2, the remainder is 11.

Now select the divisor 22 of this round as new dividend and the remainder 11 as new divisor.

Round 3:

Determine the quotient and remainder of 22 : 11.

We have $22 = 2 \cdot 11 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 11 ist also the GCD, so we have gcd(77,55)=11.

c) Number 1: 54, Number 2: 27. Determine the larger number of these: 54.

Round 1:

Determine the quotient and remainder of 54 : 27.

We have $54 = 2 \cdot 27 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 27 ist also the GCD, so we have gcd(54,27)=27.

d) Number 1: 72, Number 2: 52. Determine the larger number of these: 72.

Round 1:

Determine the quotient and remainder of 72 : 52.

We have $72 = 1 \cdot 52 + 20$, so the quotient is 1, the remainder is 20.

Now select the divisor 52 of this round as new dividend and the remainder 20 as new divisor.

Round 2:

Determine the quotient and remainder of 52 : 20.

We have $52 = 2 \cdot 20 + 12$, so the quotient is 2, the remainder is 12.

Now select the divisor 20 of this round as new dividend and the remainder 12 as new divisor.

Round 3:

Determine the quotient and remainder of 20 : 12.

We have $20 = 1 \cdot 12 + 8$, so the quotient is 1, the remainder is 8.

Now select the divisor 12 of this round as new dividend and the remainder 8 as new divisor.

Round 4:

Determine the quotient and remainder of 12 : 8.

We have $12 = 1 \cdot 8 + 4$, so the quotient is 1, the remainder is 4.

Now select the divisor 8 of this round as new dividend and the remainder 4 as new divisor.

Round 5:

Determine the quotient and remainder of 8 : 4.

We have $8 = 2 \cdot 4 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 4 ist also the GCD, so we have gcd(72,52)=4.

e) Number 1: 21, Number 2: 52. Determine the larger number of these: 52.

Round 1:

Determine the quotient and remainder of 52 : 21.

We have $52 = 2 \cdot 21 + 10$, so the quotient is 2, the remainder is 10.

Now select the divisor 21 of this round as new dividend and the remainder 10 as new divisor.

Round 2:

Determine the quotient and remainder of 21 : 10.

We have $21 = 2 \cdot 10 + 1$, so the quotient is 2, the remainder is 1.

Now select the divisor 10 of this round as new dividend and the remainder 1 as new divisor.

Round 3:

Determine the quotient and remainder of 10 : 1.

We have $10 = 10 \cdot 1 + 0$, so the quotient is 10, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(52,21)=1.

f) Number 1: 91, Number 2: 70. Determine the larger number of these: 91.

Round 1:

Determine the quotient and remainder of 91 : 70.

We have $91 = 1 \cdot 70 + 21$, so the quotient is 1, the remainder is 21.

Now select the divisor 70 of this round as new dividend and the remainder 21 as new divisor.

Round 2:

Determine the quotient and remainder of 70 : 21.

We have $70 = 3 \cdot 21 + 7$, so the quotient is 3, the remainder is 7.

Now select the divisor 21 of this round as new dividend and the remainder 7 as new divisor.

Round 3:

Determine the quotient and remainder of 21 : 7.

We have $21 = 3 \cdot 7 + 0$, so the quotient is 3, the remainder is 0.

Finished. The last dividend 7 ist also the GCD, so we have gcd(91,70)=7.

g) Number 1: 28, Number 2: 91. Determine the larger number of these: 91.

Round 1:

Determine the quotient and remainder of 91 : 28.

We have $91 = 3 \cdot 28 + 7$, so the quotient is 3, the remainder is 7.

Now select the divisor 28 of this round as new dividend and the remainder 7 as new divisor.

Round 2:

Determine the quotient and remainder of 28 : 7.

We have $28 = 4 \cdot 7 + 0$, so the quotient is 4, the remainder is 0.

Finished. The last dividend 7 ist also the GCD, so we have gcd(91,28)=7.

2)

Quick: 2001

Determine the greatest common divisor (GCD). Use the Euclidean Algorithm as shown in the example. Write down the computational steps in detail.

a) Number 1: 55, Number 2: 48. Determine the larger number of these: 55.

Round 1:

Determine the quotient and remainder of 55 : 48.

We have $55 = 1 \cdot 48 + 7$, so the quotient is 1, the remainder is 7.

Now select the divisor 48 of this round as new dividend and the remainder 7 as new divisor.

Round 2:

Determine the quotient and remainder of 48 : 7.

We have $48 = 6 \cdot 7 + 6$, so the quotient is 6, the remainder is 6.

Now select the divisor 7 of this round as new dividend and the remainder 6 as new divisor.

Round 3:

Determine the quotient and remainder of 7 : 6.

We have $7 = 1 \cdot 6 + 1$, so the quotient is 1, the remainder is 1.

Now select the divisor 6 of this round as new dividend and the remainder 1 as new divisor.

Round 4:

Determine the quotient and remainder of 6 : 1.

We have $6 = 6 \cdot 1 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(55,48)=1.

b) Number 1: 64, Number 2: 46. Determine the larger number of these: 64.

Round 1:

Determine the quotient and remainder of 64 : 46.

We have $64 = 1 \cdot 46 + 18$, so the quotient is 1, the remainder is 18.

Now select the divisor 46 of this round as new dividend and the remainder 18 as new divisor.

Round 2:

Determine the quotient and remainder of 46 : 18.

We have $46 = 2 \cdot 18 + 10$, so the quotient is 2, the remainder is 10.

Now select the divisor 18 of this round as new dividend and the remainder 10 as new divisor.

Round 3:

Determine the quotient and remainder of 18 : 10.

We have $18 = 1 \cdot 10 + 8$, so the quotient is 1, the remainder is 8.

Now select the divisor 10 of this round as new dividend and the remainder 8 as new divisor.

Round 4:

Determine the quotient and remainder of 10 : 8.

We have $10 = 1 \cdot 8 + 2$, so the quotient is 1, the remainder is 2.

Now select the divisor 8 of this round as new dividend and the remainder 2 as new divisor.

Round 5:

Determine the quotient and remainder of 8 : 2.

We have $8 = 4 \cdot 2 + 0$, so the quotient is 4, the remainder is 0.

Finished. The last dividend 2 ist also the GCD, so we have gcd(64,46)=2.

c) Number 1: 21, Number 2: 39. Determine the larger number of these: 39.

Round 1:

Determine the quotient and remainder of 39 : 21.

We have $39 = 1 \cdot 21 + 18$, so the quotient is 1, the remainder is 18.

Now select the divisor 21 of this round as new dividend and the remainder 18 as new divisor.

Round 2:

Determine the quotient and remainder of 21 : 18.

We have $21 = 1 \cdot 18 + 3$, so the quotient is 1, the remainder is 3.

Now select the divisor 18 of this round as new dividend and the remainder 3 as new divisor.

Round 3:

Determine the quotient and remainder of 18 : 3.

We have $18 = 6 \cdot 3 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(39,21)=3.

d) Number 1: 42, Number 2: 48. Determine the larger number of these: 48.

Round 1:

Determine the quotient and remainder of 48 : 42.

We have $48 = 1 \cdot 42 + 6$, so the quotient is 1, the remainder is 6.

Now select the divisor 42 of this round as new dividend and the remainder 6 as new divisor.

Round 2:

Determine the quotient and remainder of 42 : 6.

We have $42 = 7 \cdot 6 + 0$, so the quotient is 7, the remainder is 0.

Finished. The last dividend 6 ist also the GCD, so we have gcd(48,42)=6.

e) Number 1: 68, Number 2: 59. Determine the larger number of these: 68.

Round 1:

Determine the quotient and remainder of 68 : 59.

We have $68 = 1 \cdot 59 + 9$, so the quotient is 1, the remainder is 9.

Now select the divisor 59 of this round as new dividend and the remainder 9 as new divisor.

Round 2:

Determine the quotient and remainder of 59 : 9.

We have $59 = 6 \cdot 9 + 5$, so the quotient is 6, the remainder is 5.

Now select the divisor 9 of this round as new dividend and the remainder 5 as new divisor.

Round 3:

Determine the quotient and remainder of 9 : 5.

We have $9 = 1 \cdot 5 + 4$, so the quotient is 1, the remainder is 4.

Now select the divisor 5 of this round as new dividend and the remainder 4 as new divisor.

Round 4:

Determine the quotient and remainder of $5 : 4$.

We have $5 = 1 \cdot 4 + 1$, so the quotient is 1, the remainder is 1.

Now select the divisor 4 of this round as new dividend and the remainder 1 as new divisor.

Round 5:

Determine the quotient and remainder of $4 : 1$.

We have $4 = 4 \cdot 1 + 0$, so the quotient is 4, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(68,59)=1.

f) Number 1: 77, Number 2: 66. Determine the larger number of these: 77.

Round 1:

Determine the quotient and remainder of $77 : 66$.

We have $77 = 1 \cdot 66 + 11$, so the quotient is 1, the remainder is 11.

Now select the divisor 66 of this round as new dividend and the remainder 11 as new divisor.

Round 2:

Determine the quotient and remainder of $66 : 11$.

We have $66 = 6 \cdot 11 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 11 ist also the GCD, so we have gcd(77,66)=11.

g) Number 1: 68, Number 2: 27. Determine the larger number of these: 68.

Round 1:

Determine the quotient and remainder of $68 : 27$.

We have $68 = 2 \cdot 27 + 14$, so the quotient is 2, the remainder is 14.

Now select the divisor 27 of this round as new dividend and the remainder 14 as new divisor.

Round 2:

Determine the quotient and remainder of $27 : 14$.

We have $27 = 1 \cdot 14 + 13$, so the quotient is 1, the remainder is 13.

Now select the divisor 14 of this round as new dividend and the remainder 13 as new divisor.

Round 3:

Determine the quotient and remainder of 14 : 13.

We have $14 = 1 \cdot 13 + 1$, so the quotient is 1, the remainder is 1.

Now select the divisor 13 of this round as new dividend and the remainder 1 as new divisor.

Round 4:

Determine the quotient and remainder of 13 : 1.

We have $13 = 13 \cdot 1 + 0$, so the quotient is 13, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(68,27)=1.

3)

Quick: 2001

Determine the greatest common divisor (GCD). Use the Euclidean Algorithm as shown in the example. Write down the computational steps in detail.

a) Number 1: 351, Number 2: 969. Determine the larger number of these: 969.

Round 1:

Determine the quotient and remainder of 969 : 351.

We have $969 = 2 \cdot 351 + 267$, so the quotient is 2, the remainder is 267.

Now select the divisor 351 of this round as new dividend and the remainder 267 as new divisor.

Round 2:

Determine the quotient and remainder of 351 : 267.

We have $351 = 1 \cdot 267 + 84$, so the quotient is 1, the remainder is 84.

Now select the divisor 267 of this round as new dividend and the remainder 84 as new divisor.

Round 3:

Determine the quotient and remainder of 267 : 84.

We have $267 = 3 \cdot 84 + 15$, so the quotient is 3, the remainder is 15.

Now select the divisor 84 of this round as new dividend and the remainder 15 as new divisor.

Round 4:

Determine the quotient and remainder of 84 : 15.

We have $84 = 5 \cdot 15 + 9$, so the quotient is 5, the remainder is 9.

Now select the divisor 15 of this round as new dividend and the remainder 9 as new divisor.

Round 5:

Determine the quotient and remainder of 15 : 9.

We have $15 = 1 \cdot 9 + 6$, so the quotient is 1, the remainder is 6.

Now select the divisor 9 of this round as new dividend and the remainder 6 as new divisor.

Round 6:

Determine the quotient and remainder of 9 : 6.

We have $9 = 1 \cdot 6 + 3$, so the quotient is 1, the remainder is 3.

Now select the divisor 6 of this round as new dividend and the remainder 3 as new divisor.

Round 7:

Determine the quotient and remainder of 6 : 3.

We have $6 = 2 \cdot 3 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(969,351)=3.

b) Number 1: 800, Number 2: 568. Determine the larger number of these: 800.

Round 1:

Determine the quotient and remainder of 800 : 568.

We have $800 = 1 \cdot 568 + 232$, so the quotient is 1, the remainder is 232.

Now select the divisor 568 of this round as new dividend and the remainder 232 as new divisor.

Round 2:

Determine the quotient and remainder of 568 : 232.

We have $568 = 2 \cdot 232 + 104$, so the quotient is 2, the remainder is 104.

Now select the divisor 232 of this round as new dividend and the remainder 104 as new divisor.

Round 3:

Determine the quotient and remainder of 232 : 104.

We have $232 = 2 \cdot 104 + 24$, so the quotient is 2, the remainder is 24.

Now select the divisor 104 of this round as new dividend and the remainder 24 as new divisor.

Round 4:

Determine the quotient and remainder of 104 : 24.

We have $104 = 4 \cdot 24 + 8$, so the quotient is 4, the remainder is 8.

Now select the divisor 24 of this round as new dividend and the remainder 8 as new divisor.

Round 5:

Determine the quotient and remainder of 24 : 8.

We have $24 = 3 \cdot 8 + 0$, so the quotient is 3, the remainder is 0.

Finished. The last dividend 8 ist also the GCD, so we have gcd(800,568)=8.

c) Number 1: 620, Number 2: 284. Determine the larger number of these: 620.

Round 1:

Determine the quotient and remainder of 620 : 284.

We have $620 = 2 \cdot 284 + 52$, so the quotient is 2, the remainder is 52.

Now select the divisor 284 of this round as new dividend and the remainder 52 as new divisor.

Round 2:

Determine the quotient and remainder of 284 : 52.

We have $284 = 5 \cdot 52 + 24$, so the quotient is 5, the remainder is 24.

Now select the divisor 52 of this round as new dividend and the remainder 24 as new divisor.

Round 3:

Determine the quotient and remainder of 52 : 24.

We have $52 = 2 \cdot 24 + 4$, so the quotient is 2, the remainder is 4.

Now select the divisor 24 of this round as new dividend and the remainder 4 as new divisor.

Round 4:

Determine the quotient and remainder of 24 : 4.

We have $24 = 6 \cdot 4 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 4 ist also the GCD, so we have gcd(620,284)=4.

d) Number 1: 341, Number 2: 875. Determine the larger number of these: 875.

Round 1:

Determine the quotient and remainder of 875 : 341.

We have $875 = 2 \cdot 341 + 193$, so the quotient is 2, the remainder is 193.

Now select the divisor 341 of this round as new dividend and the remainder 193 as new divisor.

Round 2:

Determine the quotient and remainder of 341 : 193.

We have $341 = 1 \cdot 193 + 148$, so the quotient is 1, the remainder is 148.

Now select the divisor 193 of this round as new dividend and the remainder 148 as new divisor.

Round 3:

Determine the quotient and remainder of 193 : 148.

We have $193 = 1 \cdot 148 + 45$, so the quotient is 1, the remainder is 45.

Now select the divisor 148 of this round as new dividend and the remainder 45 as new divisor.

Round 4:

Determine the quotient and remainder of 148 : 45.

We have $148 = 3 \cdot 45 + 13$, so the quotient is 3, the remainder is 13.

Now select the divisor 45 of this round as new dividend and the remainder 13 as new divisor.

Round 5:

Determine the quotient and remainder of 45 : 13.

We have $45 = 3 \cdot 13 + 6$, so the quotient is 3, the remainder is 6.

Now select the divisor 13 of this round as new dividend and the remainder 6 as new divisor.

Round 6:

Determine the quotient and remainder of 13 : 6.

We have $13 = 2 \cdot 6 + 1$, so the quotient is 2, the remainder is 1.

Now select the divisor 6 of this round as new dividend and the remainder 1 as new divisor.

Round 7:

Determine the quotient and remainder of 6 : 1.

We have $6 = 6 \cdot 1 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(875,341)=1.

e) Number 1: 921, Number 2: 879. Determine the larger number of these: 921.

Round 1:

Determine the quotient and remainder of 921 : 879.

We have $921 = 1 \cdot 879 + 42$, so the quotient is 1, the remainder is 42.

Now select the divisor 879 of this round as new dividend and the remainder 42 as new divisor.

Round 2:

Determine the quotient and remainder of 879 : 42.

We have $879 = 20 \cdot 42 + 39$, so the quotient is 20, the remainder is 39.

Now select the divisor 42 of this round as new dividend and the remainder 39 as new divisor.

Round 3:

Determine the quotient and remainder of 42 : 39.

We have $42 = 1 \cdot 39 + 3$, so the quotient is 1, the remainder is 3.

Now select the divisor 39 of this round as new dividend and the remainder 3 as new divisor.

Round 4:

Determine the quotient and remainder of 39 : 3.

We have $39 = 13 \cdot 3 + 0$, so the quotient is 13, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(921,879)=3.

f) Number 1: 396, Number 2: 981. Determine the larger number of these: 981.

Round 1:

Determine the quotient and remainder of 981 : 396.

We have $981 = 2 \cdot 396 + 189$, so the quotient is 2, the remainder is 189.

Now select the divisor 396 of this round as new dividend and the remainder 189 as new divisor.

Round 2:

Determine the quotient and remainder of 396 : 189.

We have $396 = 2 \cdot 189 + 18$, so the quotient is 2, the remainder is 18.

Now select the divisor 189 of this round as new dividend and the remainder 18 as new divisor.

Round 3:

Determine the quotient and remainder of 189 : 18.

We have $189 = 10 \cdot 18 + 9$, so the quotient is 10, the remainder is 9.

Now select the divisor 18 of this round as new dividend and the remainder 9 as new divisor.

Round 4:

Determine the quotient and remainder of 18 : 9.

We have $18 = 2 \cdot 9 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 9 ist also the GCD, so we have gcd(981,396)=9.

g) Number 1: 228, Number 2: 915. Determine the larger number of these: 915.

Round 1:

Determine the quotient and remainder of 915 : 228.

We have $915 = 4 \cdot 228 + 3$, so the quotient is 4, the remainder is 3.

Now select the divisor 228 of this round as new dividend and the remainder 3 as new divisor.

Round 2:

Determine the quotient and remainder of 228 : 3.

We have $228 = 76 \cdot 3 + 0$, so the quotient is 76, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(915,228)=3.

4)

Quick: 2001

Determine the greatest common divisor (GCD). Use the Euclidean Algorithm and write down the computational steps in detail.

a) Number 1: 82, Number 2: 58. Determine the larger number of these: 82.

Round 1:

Determine the quotient and remainder of 82 : 58.

We have $82 = 1 \cdot 58 + 24$, so the quotient is 1, the remainder is 24.

Now select the divisor 58 of this round as new dividend and the remainder 24 as new divisor.

Round 2:

Determine the quotient and remainder of 58 : 24.

We have $58 = 2 \cdot 24 + 10$, so the quotient is 2, the remainder is 10.

Now select the divisor 24 of this round as new dividend and the remainder 10 as new divisor.

Round 3:

Determine the quotient and remainder of 24 : 10.

We have $24 = 2 \cdot 10 + 4$, so the quotient is 2, the remainder is 4.

Now select the divisor 10 of this round as new dividend and the remainder 4 as new divisor.

Round 4:

Determine the quotient and remainder of 10 : 4.

We have $10 = 2 \cdot 4 + 2$, so the quotient is 2, the remainder is 2.

Now select the divisor 4 of this round as new dividend and the remainder 2 as new divisor.

Round 5:

Determine the quotient and remainder of 4 : 2.

We have $4 = 2 \cdot 2 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 2 ist also the GCD, so we have gcd(82,58)=2.

b) Number 1: 33, Number 2: 99. Determine the larger number of these: 99.

Round 1:

Determine the quotient and remainder of 99 : 33.

We have $99 = 3 \cdot 33 + 0$, so the quotient is 3, the remainder is 0.

Finished. The last dividend 33 ist also the GCD, so we have gcd(99,33)=33.

c) Number 1: 86, Number 2: 43. Determine the larger number of these: 86.

Round 1:

Determine the quotient and remainder of 86 : 43.

We have $86 = 2 \cdot 43 + 0$, so the quotient is 2, the remainder is 0.

Finished. The last dividend 43 ist also the GCD, so we have gcd(86,43)=43.

d) Number 1: 39, Number 2: 57. Determine the larger number of these: 57.

Round 1:

Determine the quotient and remainder of 57 : 39.

We have $57 = 1 \cdot 39 + 18$, so the quotient is 1, the remainder is 18.

Now select the divisor 39 of this round as new dividend and the remainder 18 as new divisor.

Round 2:

Determine the quotient and remainder of 39 : 18.

We have $39 = 2 \cdot 18 + 3$, so the quotient is 2, the remainder is 3.

Now select the divisor 18 of this round as new dividend and the remainder 3 as new divisor.

Round 3:

Determine the quotient and remainder of 18 : 3.

We have $18 = 6 \cdot 3 + 0$, so the quotient is 6, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(57,39)=3.

e) Number 1: 46, Number 2: 97. Determine the larger number of these: 97.

Round 1:

Determine the quotient and remainder of 97 : 46.

We have $97 = 2 \cdot 46 + 5$, so the quotient is 2, the remainder is 5.

Now select the divisor 46 of this round as new dividend and the remainder 5 as new divisor.

Round 2:

Determine the quotient and remainder of 46 : 5.

We have $46 = 9 \cdot 5 + 1$, so the quotient is 9, the remainder is 1.

Now select the divisor 5 of this round as new dividend and the remainder 1 as new divisor.

Round 3:

Determine the quotient and remainder of 5 : 1.

We have $5 = 5 \cdot 1 + 0$, so the quotient is 5, the remainder is 0.

Finished. The last dividend 1 ist also the GCD, so we have gcd(97,46)=1.

f) Number 1: 75, Number 2: 39. Determine the larger number of these: 75.

Round 1:

Determine the quotient and remainder of 75 : 39.

We have $75 = 1 \cdot 39 + 36$, so the quotient is 1, the remainder is 36.

Now select the divisor 39 of this round as new dividend and the remainder 36 as new divisor.

Round 2:

Determine the quotient and remainder of 39 : 36.

We have $39 = 1 \cdot 36 + 3$, so the quotient is 1, the remainder is 3.

Now select the divisor 36 of this round as new dividend and the remainder 3 as new divisor.

Round 3:

Determine the quotient and remainder of 36 : 3.

We have $36 = 12 \cdot 3 + 0$, so the quotient is 12, the remainder is 0.

Finished. The last dividend 3 ist also the GCD, so we have gcd(75,39)=3.

g) Number 1: 24, Number 2: 54. Determine the larger number of these: 54.

Round 1:

Determine the quotient and remainder of 54 : 24.

We have $54 = 2 \cdot 24 + 6$, so the quotient is 2, the remainder is 6.

Now select the divisor 24 of this round as new dividend and the remainder 6 as new divisor.

Round 2:

Determine the quotient and remainder of 24 : 6.

We have $24 = 4 \cdot 6 + 0$, so the quotient is 4, the remainder is 0.

Finished. The last dividend 6 ist also the GCD, so we have gcd(54,24)=6.

Good Luck!