

Trends in the Periodic Table

Interpreting the Periodic Table

Going across the table from left to right within a row or period

- The number of protons increases.
- The pull on the electrons increases.
- The covalent atomic radius decreases.
- Metallic properties decrease (except in the transition elements)
 - Ionization energy increases.
 - Ionization energy - energy needed to remove the most loosely held electron from an element in the gaseous phase
 - Found in Table S
 - second ionization energy - it requires more energy to remove each successive electron.
 - Electronegativity increases (also Table S).
 - There is a gradual change from positive oxidation states to negative oxidation states.
- The number of valence electrons increases.
- The number of shells remains the same.

Going down the table within a group or family

- The number of protons increases.
- The number of shells increases.
- The atomic radius increases.
- The pull on the electrons decreases.
- Metallic properties increase.
- The number of valence electrons remains the same.

Resulting Arrangement

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2-8-8-290	309 2-8-8-291	310 2-8-8-292	311 2-8-8-293	312 2-8-8-294	313 2-8-8-295	314 2-8-8-296	315 2-8-8-297	316 2-8-8-298	317 2-8-8-299	318 2-8-8-300	319 2-8-8-301	320 2-8-8-302	321 2-8-8-303	322 2-8-8-304	323 2-8-8-305	324 2-8-8-306	325 2-8-8-307	326 2-8-8-308	327 2-8-8-309	328 2-8-8-310	329 2-8-8-311	330 2-8-8-312	331 2-8-8-313	332 2-8-8-314	333 2-8-8-315	334 2-8-8-316	335 2-8-8-317	336 2-8-8-318	337 2-8-8-319	338 2-8-8-320	339 2-8-8-321	340 2-8-8-322	341 2-8-8-323	342 2-8-8-324	343 2-8-8-325	344 2-8-8-326	345 2-8-8-327	346 2-8-8-328	347 2-8-8-329	348 2-8-8-330	349 2-8-8-331	350 2-8-8-332	351 2-8-8-333	352 2-8-8-334	353 2-8-8-335	354 2-8-8-336	355 2-8-8-337	356 2-8-8-338	357 2-8-8-339	358 2-8-8-340	359 2-8-8-341	360 2-8-8-342	361 2-8-8-343	362 2-8-8-344	363 2-8-8-345	364 2-8-8-346	365 2-8-8-347	366 2-8-8-348	367 2-8-8-349	368 2-8-8-350	369 2-8-8-351	370 2-8-8-352	371 2-8-8-353	372 2-8-8-354	373 2-8-8-355	374 2-8-8-356	375 2-8-8-357	376 2-8-8-358	377 2-8-8-359	378 2-8-8-360	379 2-8-8-361	380 2-8-8-362	381 2-8-8-363	382 2-8-8-364	383 2-8-8-365	384 2-8-8-366	385 2-8-8-367	386 2-8-8-368	387 2-8-8-369	388 2-8-8-370	389 2-8-8-371	390 2-8-8-372	391 2-8-8-373	392 2-8-8-374	393 2-8-8-375	394 2-8-8-376	395 2-8-8-377	396 2-8-8-378	397 2-8-8-379	398 2-8-8-380	399 2-8-8-381	400 2-8-8-382	401 2-8-8-383	402 2-8-8-384	403 2-8-8-385	404 2-8-8-386	405 2-8-8-387	406 2-8-8-388	407 2-8-8-389	408 2-8-8-390	409 2-8-8-391	410 2-8-8-392	411 2-8-8-393	412 2-8-8-394	413 2-8-8-395	414 2-8-8-396	415 2-8-8-397	416 2-8-8-398	417 2-8-8-399	418 2-8-8-400	419 2-8-8-401	420 2-8-8-402	421 2-8-8-403	422 2-8-8-404	423 2-8-8-405	424 2-8-8-406	425 2-8-8-407	426 2-8-8-408	427 2-8-8-409	428 2-8-8-410	429 2-8-8-411	430 2-8-8-412	431 2-8-8-413	432 2-8-8-414	433 2-8-8-415	434 2-8-8-416	435 2-8-8-417	436 2-8-8-418	437 2-8-8-419	438 2-8-8-420	439 2-8-8-421	440 2-8-8-422	441 2-8-8-423	442 2-8-8-424	443 2-8-8-425	444 2-8-8-426	445 2-8-8-427	446 2-8-8-428	447 2-8-8-429	448 2-8-8-430	449 2-8-8-431	450 2-8-8-432	451 2-8-8-433	452 2-8-8-434	453 2-8-8-435	454 2-8-8-436	455 2-8-8-437	456 2-8-8-438	457 2-8-8-439	458 2-8-8-440	459 2-8-8-441	460 2-8-8-442	461 2-8-8-443	462 2-8-8-444	463 2-8-8-445	464 2-8-8-446	465 2-8-8-447	466 2-8-8-448	467 2-8-8-449	468 2-8-8-450	469 2-8-8-451	470 2-8-8-452	471 2-8-8-453	472 2-8-8-454	473 2-8-8-455	474 2-8-8-456	475 2-8-8-457	476 2-8-8-458	477 2-8-8-459	478 2-8-8-460	479 2-8-8-461	480 2-8-8-462	481 2-8-8-463	482 2-8-8-464	483 2-8-8-465	484 2-8-8-466	485 2-8-8-467	486 2-8-8-468	487 2-8-8-469	488 2-8-8-470	489 2-8-8-471	490 2-8-8-472	491 2-8-8-473	492 2-8-8-474	493 2-8-8-475	494 2-8-8-476	495 2-8-8-477	496 2-8-8-478	497 2-8-8-479	498 2-8-8-480	499 2-8-8-481	500 2-8-8-482	501 2-8-8-483	502 2-8-8-484	503 2-8-8-485	504 2-8-8-486	505 2-8-8-487	506 2-8-8-488	507 2-8-8-489	508 2-8-8-490	509 2-8-8-491	510 2-8-8-492	511 2-8-8-493	512 2-8-8-494	513 2-8-8-495	514 2-8-8-496	515 2-8-8-497	516 2-8-8-498	517 2-8-8-499	518 2-8-8-500	519 2-8-8-501	520 2-8-8-502	521 2-8-8-503	522 2-8-8-504	523 2-8-8-505	524 2-8-8-506	525 2-8-8-507	526 2-8-8-508	527 2-8-8-509	528 2-8-8-510	529 2-8-8-511	530 2-8-8-512	531 2-8-8-513	532 2-8-8-514	533 2-8-8-515	534 2-8-8-516	535 2-8-8-517	536 2-8-8-518	537 2-8-8-519	538 2-8-8-520	539 2-8-8-521	540 2-8-8-522	541 2-8-8-523	542 2-8-8-524	543 2-8-8-525	544 2-8-8-526	545 2-8-8-527	546 2-8-8-528	547 2-8-8-529	548 2-8-8-530	549 2-8-8-531	550 2-8-8-532	551 2-8-8-533	552 2-8-8-534	553 2-8-8-535	554 2-8-8-536	555 2-8-8-537	556 2-8-8-538	557 2-8-8-539	558 2-8-8-540	559 2-8-8-541	560 2-8-8-542	561 2-8-8-543	562 2-8-8-544	563 2-8-8-545	564 2-8-8-546	565 2-8-8-547	566 2-8-8-548	567 2-8-8-549	568 2-8-8-550	569 2-8-8-551	570 2-8-8-552	571 2-8-8-553	572 2-8-8-554	573 2-8-8-555	574 2-8-8-556	575 2-8-8-557	576 2-8-8-558	577 2-8-8-559	578 2-8-8-560	579 2-8-8-561	580 2-8-8-562	581 2-8-8-563	582 2-8-8-564	583 2-8-8-565	584 2-8-8-566	585 2-8-8-567	586 2-8-8-568	587 2-8-8-569	588 2-8-8-570	589 2-8-8-571	590 2-8-8-572	591 2-8-8-573	592 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Resulting Arrangement

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