

Number sequences

Complete the number sequences by filling in the spaces below. State whether the sequences are ascending or descending order.

Ascending or descending?

- | | | | | | | | | |
|----|------|------|------|------|------|------|------|------------|
| 1. | -16, | -9, | -2, | 5, | 12, | 19, | 26, | Ascending |
| 2. | 20, | 31, | 42, | 53, | 64, | 75, | 86, | Ascending |
| 3. | 133, | 130, | 127, | 124, | 121, | 118, | 115, | Descending |
| 4. | 11, | 17, | 23, | 29, | 35, | 41, | 47, | Ascending |
| 5. | 9, | 0, | -9, | -18, | -27, | -36, | -45, | Descending |
| 6. | 26, | 16, | 6, | -4, | -14, | -24, | -34, | Descending |
| 7. | -5, | 0, | 5, | 10, | 15, | 20, | 25, | Ascending |
| 8. | 2.5, | 3.0, | 3.5, | 4.0, | 4.5, | 5.0, | 5.5, | Ascending |

Now have a go at these more tricky sequences!

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|-----|----|-----|-----|------|------|-------|-------|-----------|
| 9. | 2, | 4, | 8, | 16, | 32, | 64, | 128, | Ascending |
| 10. | 6, | 18, | 54, | 162, | 486, | 1458, | 4374, | Ascending |

Think very carefully now. Can you write down the short hand rule for each of the above sequences? The first one has been done for you.

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|----|--------------------|-----|---------------|
| 1. | <u>NN = LN + 7</u> | 2. | NN = LN + 11 |
| 3. | NN = LN - 3 | 4. | NN = LN + 6 |
| 5. | NN = LN - 9 | 6. | NN = LN - 10 |
| 7. | NN = LN + 5 | 8. | NN = LN + 0.5 |
| 9. | NN = LN x 2 | 10. | NN = LN x 3 |

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Complete the number sequences by filling in the spaces below. State whether they are ascending or descending order.

Ascending or descending?

- | | | | | | | | | |
|-----|------|------|------|------|------|------|-------|------------|
| 1. | 13, | 25, | 37, | 49, | 61, | 73, | 85, | Ascending |
| 2. | 20, | 31, | 42, | 53, | 64, | 75, | 86, | Ascending |
| 3. | 26, | 23, | 20, | 17, | 14, | 11, | 8, | Descending |
| 4. | 11, | 17, | 23, | 29, | 35, | 41, | 47, | Ascending |
| 5. | -16, | -9, | -2, | 5, | 12, | 19, | 26, | Ascending |
| 6. | 133, | 130, | 127, | 124, | 121, | 118, | 115, | Descending |
| 7. | -25, | -20, | -15, | -10, | -5, | 0, | 5, | Ascending |
| 8. | 9, | 0, | -9, | -18, | -27, | -36, | -45, | Descending |
| 9. | 91, | 102, | 113, | 124, | 135, | 146, | 157, | Ascending |
| 10. | 97, | 64, | 31, | -2, | -35, | -68, | -101, | Descending |

Think very carefully now. Can you write down the short hand rule for each of the above sequences? The first one has been done for you.

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|------------------------|------------------|
| 1. <u>NN = LN + 12</u> | 2. NN = LN + 11 |
| 3. NN = LN - 3 | 4. NN = LN + 6 |
| 5. NN = LN + 7 | 6. NN = LN - 3 |
| 7. NN = LN + 5 | 8. NN = LN - 9 |
| 9. NN = LN + 11 | 10. NN = LN - 33 |