Liczenie na sorobanie

Aleksandra Goldstein

SOROBAN

Soroban pochodzi z Dalekiego Wschodu, a dokładnie z Japonii. Jednak swoje początki ma w Chinach. Około roku 1200, chińczycy zaczęli używać liczydła zbudowanego na systemie 2/5. W górnej części liczydła, znajdowały się 2 koraliki, każdy o wartości 5.
W dolnej części liczydła, znajdowało się 5 koralików, każdy o wartości 1. Liczenie odbywało się w systemie dziesiętnym. Górna „5" upraszczała obliczenia.
W XVII wieku liczydło rozpowszechniło się w Korei i Japonii.

Przy czym pojawiła się jego nowa wersja 1/5, w której na górze był 1 koralik o wartości 5, a na dole 5 koralików każdy o wartości 1.

Stąd już tylko krok do dzisiejszej postaci 1/4, czyli takiego, w którym w góry znajduje się jeden koralik o wartości 5, a na dole 4 koraliki, każdy o wartości 1 (Japonia rok 1930).

Soroban stał się tam tak popularny, że jeszcze w połowie lat dziewięćdziesiątych, był obowiązkowym wyposażeniem wszystkich japońskich urzędników, a dawniej biznesmeni sprawdzali na nim poprawność obliczeń komputerowych.

Rzymski akcent w sorobanie

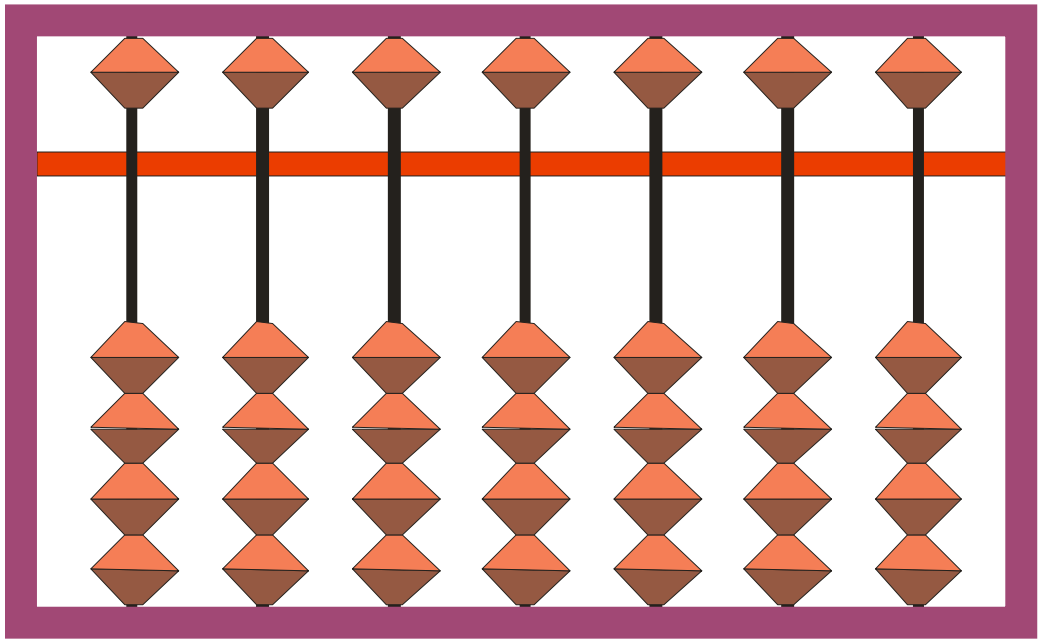
- „Pomocnicza 5″ jest powszechnie znana, grupujemy wartości do 5, a następnie do 10.
- 4=5-1 (IV), 6=5+1 (VI), 7=5+2 (VII), a 10 (X) to znak powstający z połączenia dwóch liter „V”.
- Wprowadzenie cyfr arabskich odsunęło w cień ideę „pomocniczej 5″.

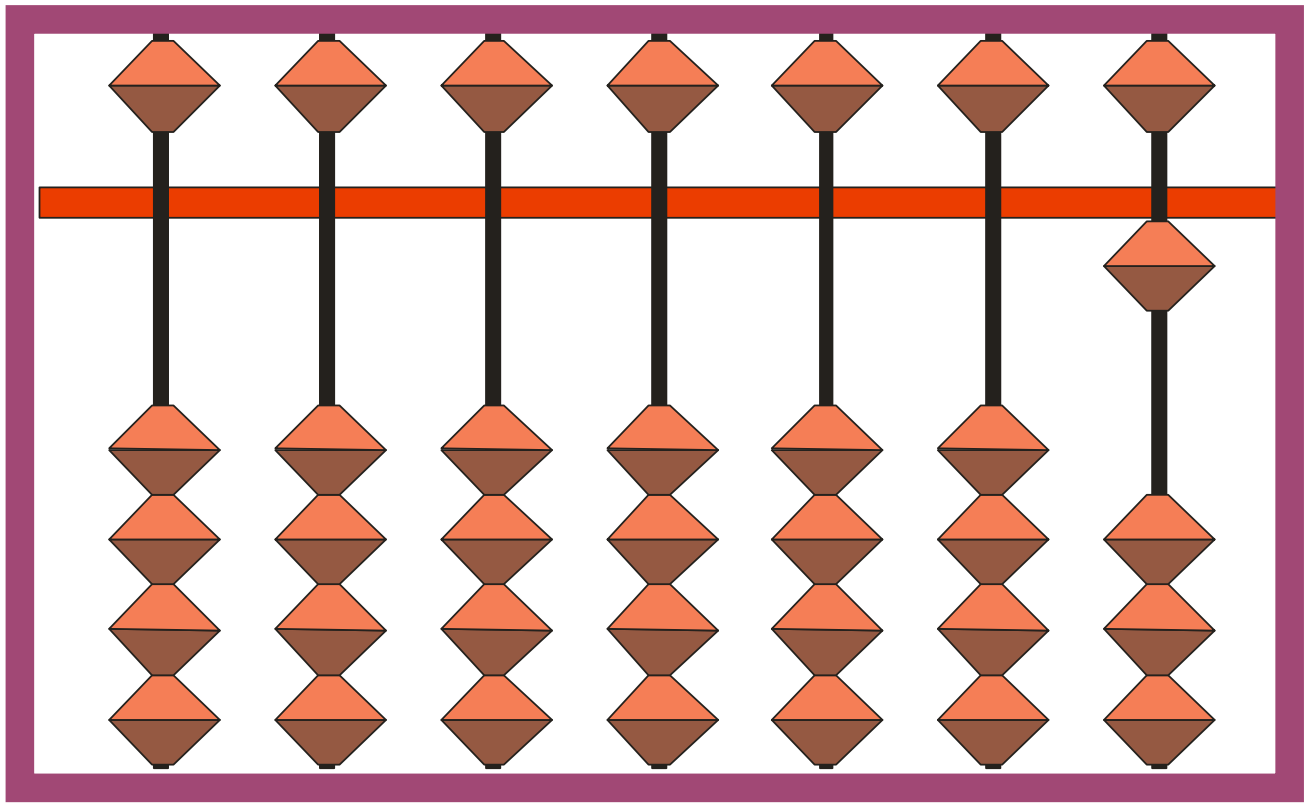
Zerowanie sorobanu

Wyzerowanie liczydła polega na maksymalnym rozsunięciu koralików od siebie.
Japończycy nazywają dolne koraliki ziemią, górne niebem, zatem zerowanie polega na oddzieleniu ziemi od nieba.

Cyfry

Na każdej kolumnie jest 5 koralików: 4 na dole i 1 na górze. Każdy dolny koralik ma wartość 1. Każdy górny koralik ma natomiast wartość 5. Przesuniecie tego koralika w dół to dodanie pięciu, a przesunięcie w górę to odjęcie pięciu.





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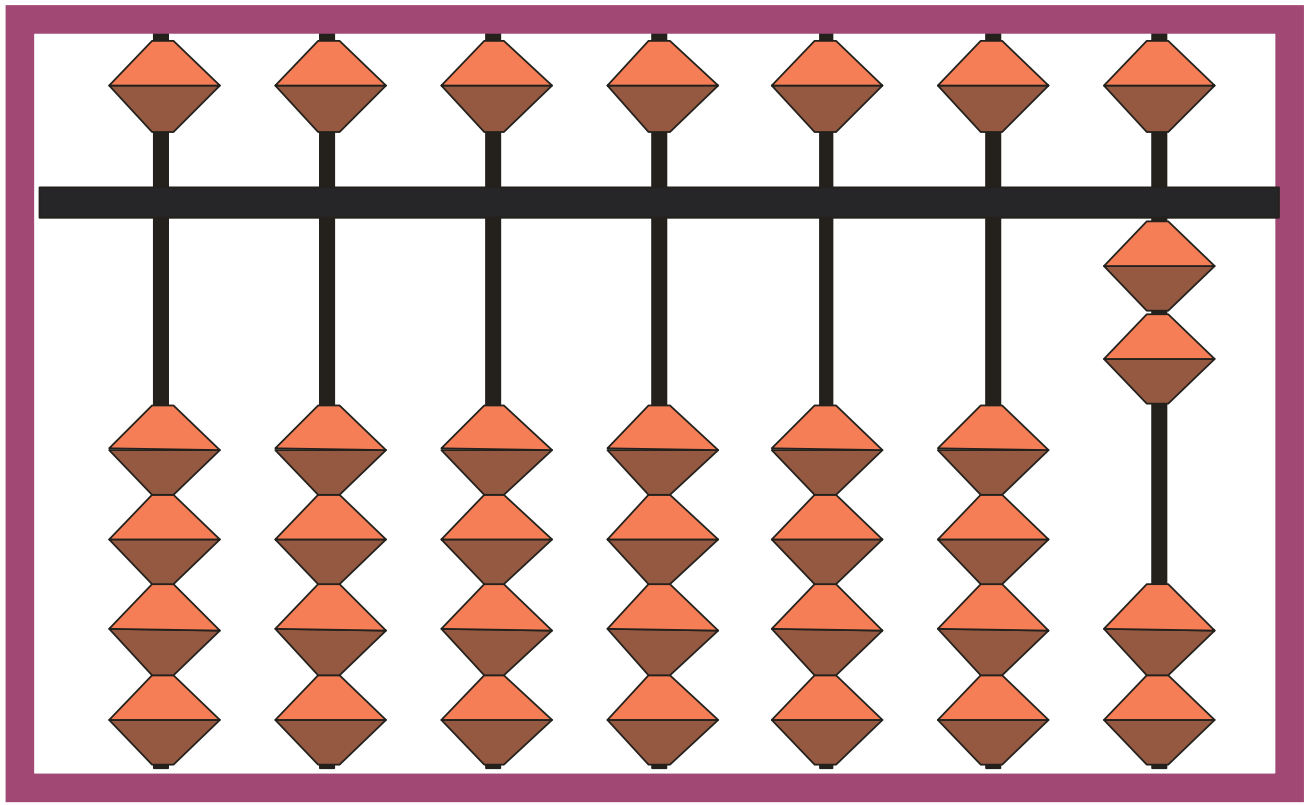

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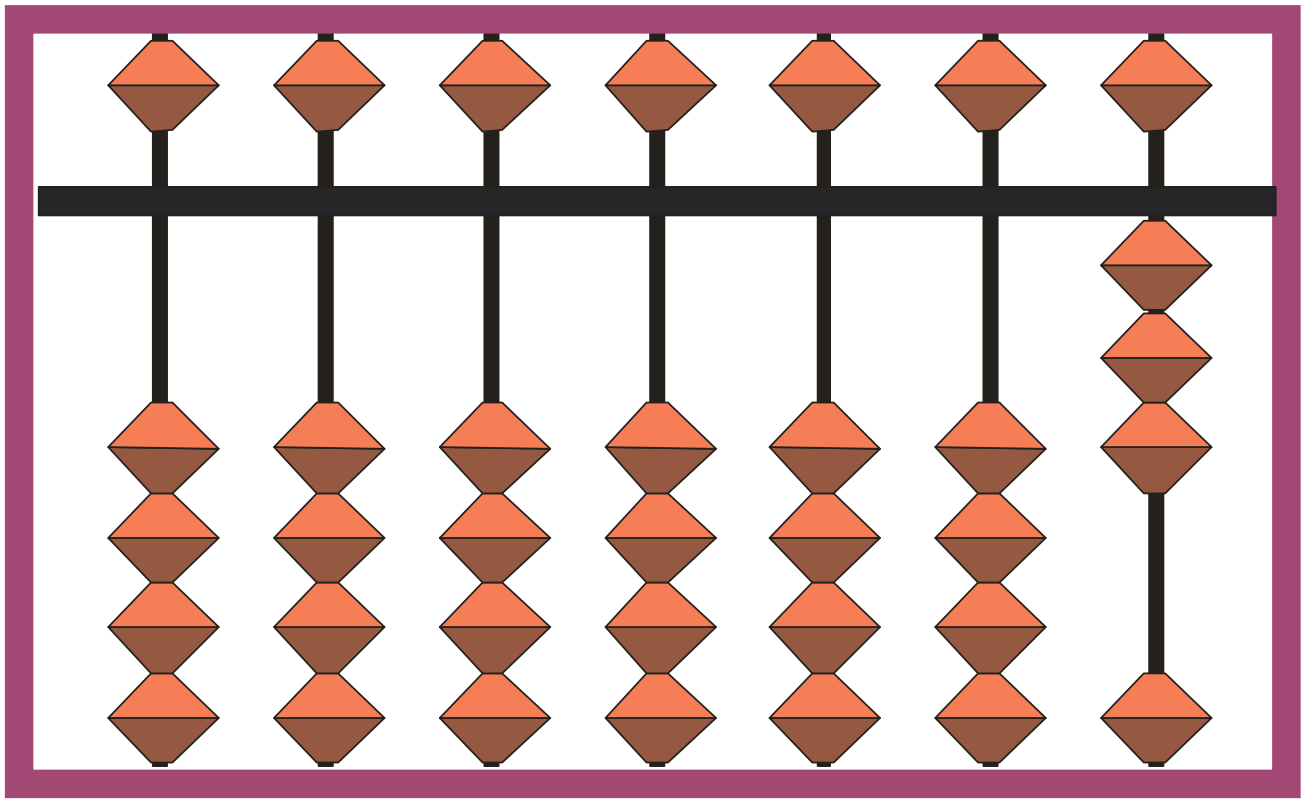

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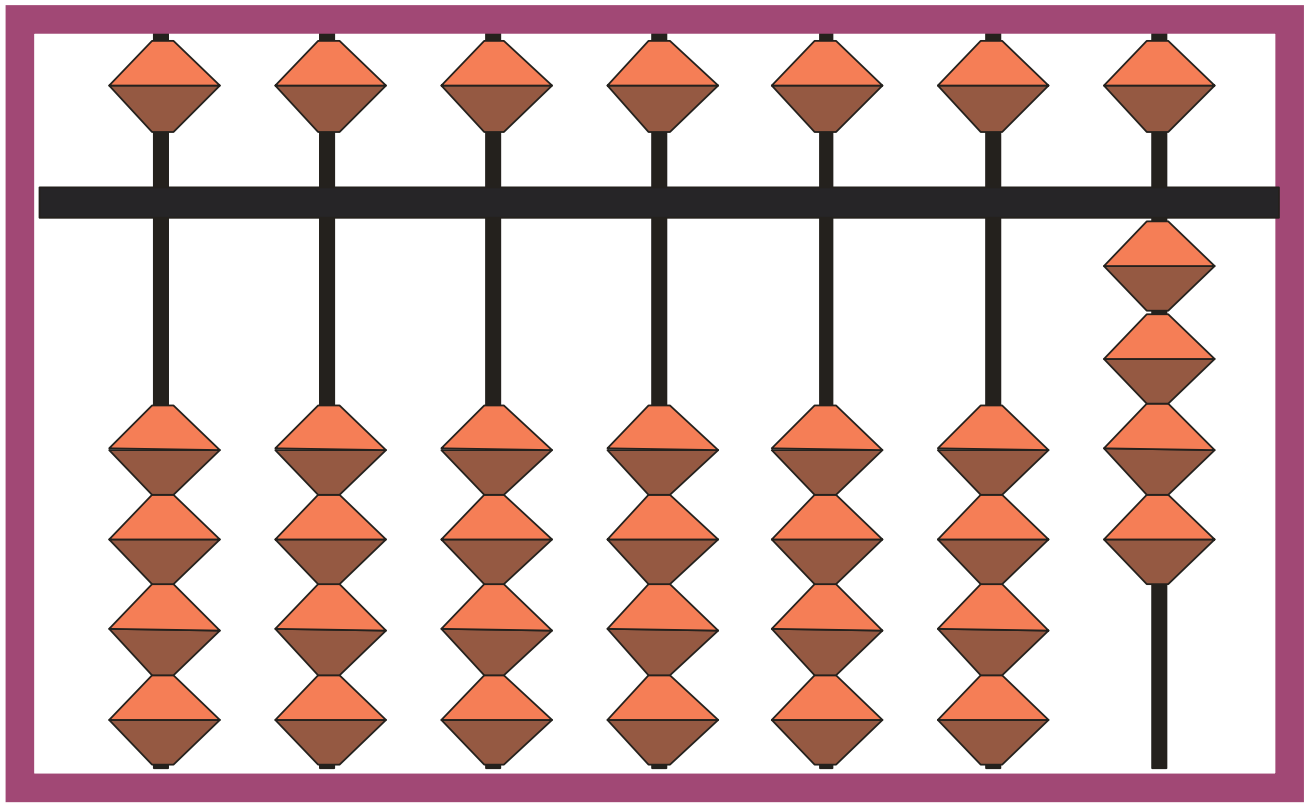

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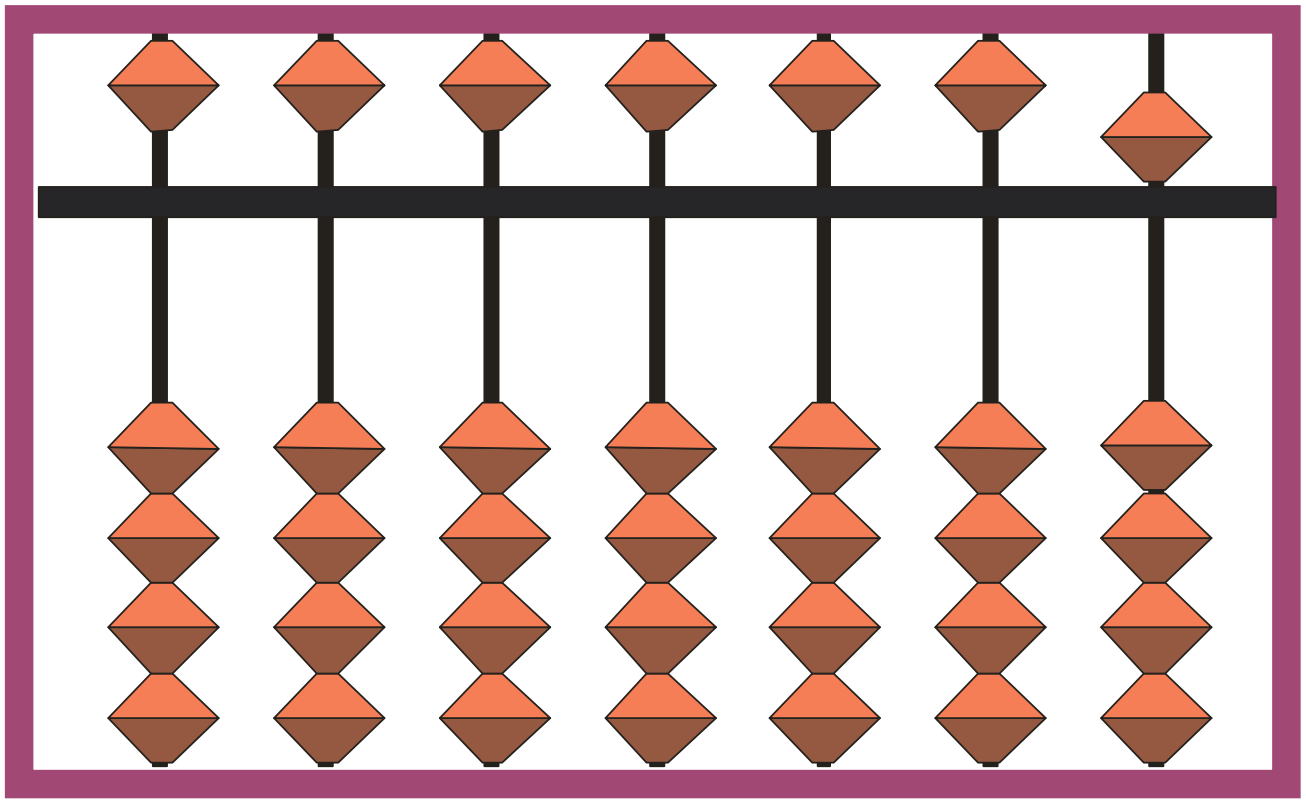

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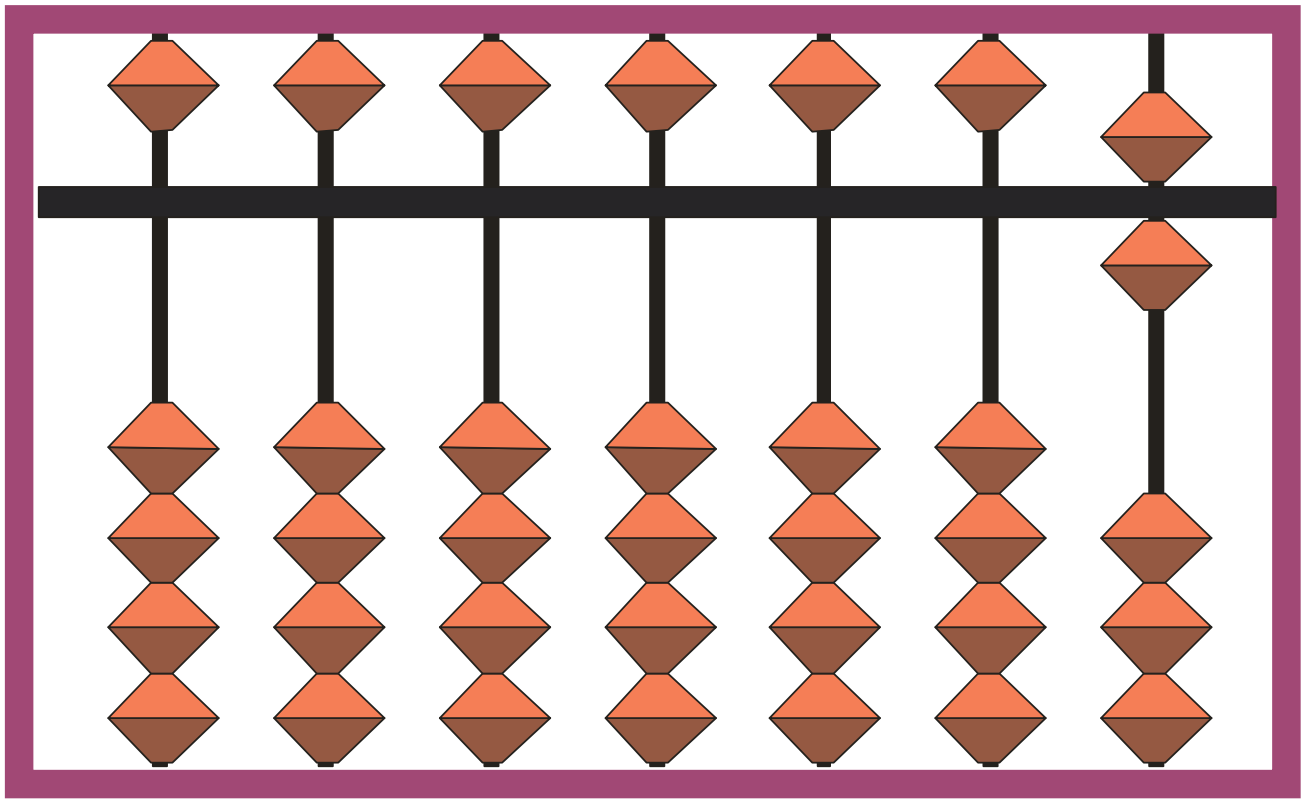

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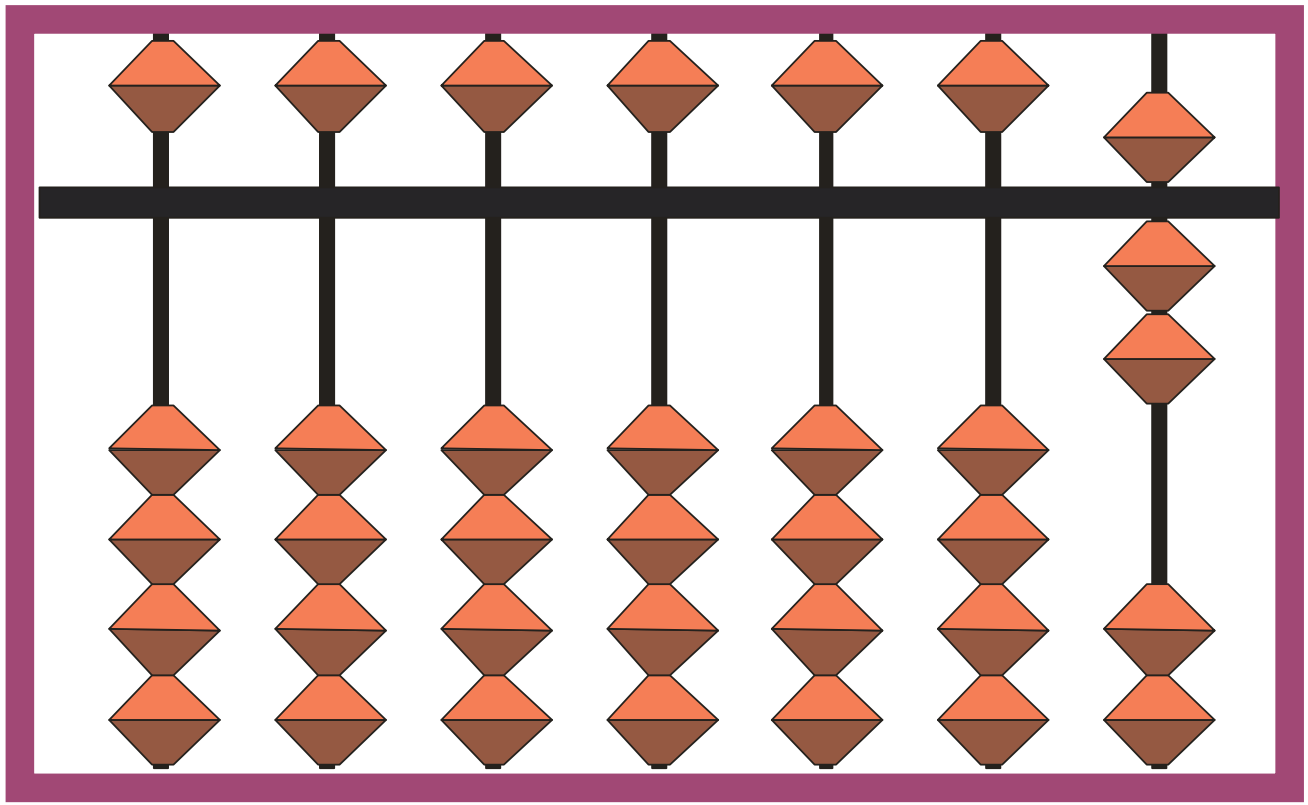

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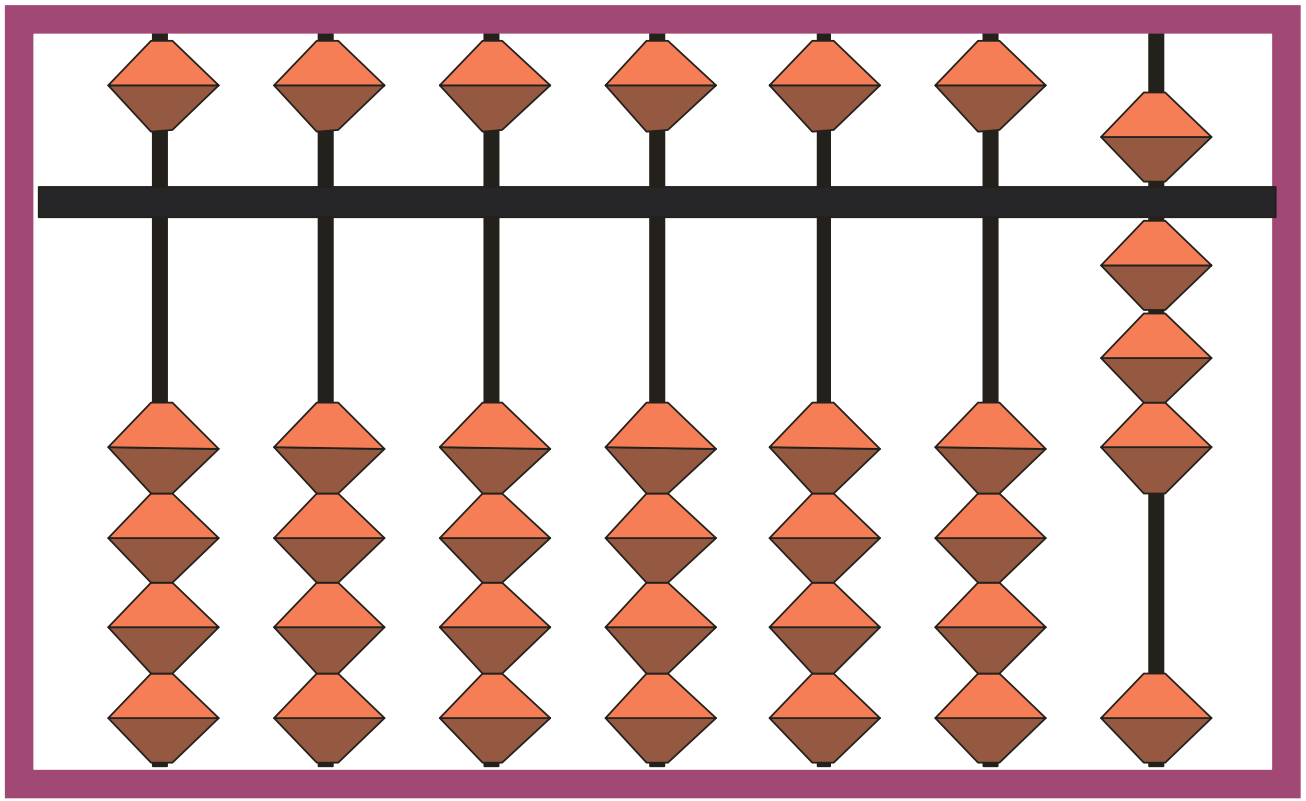

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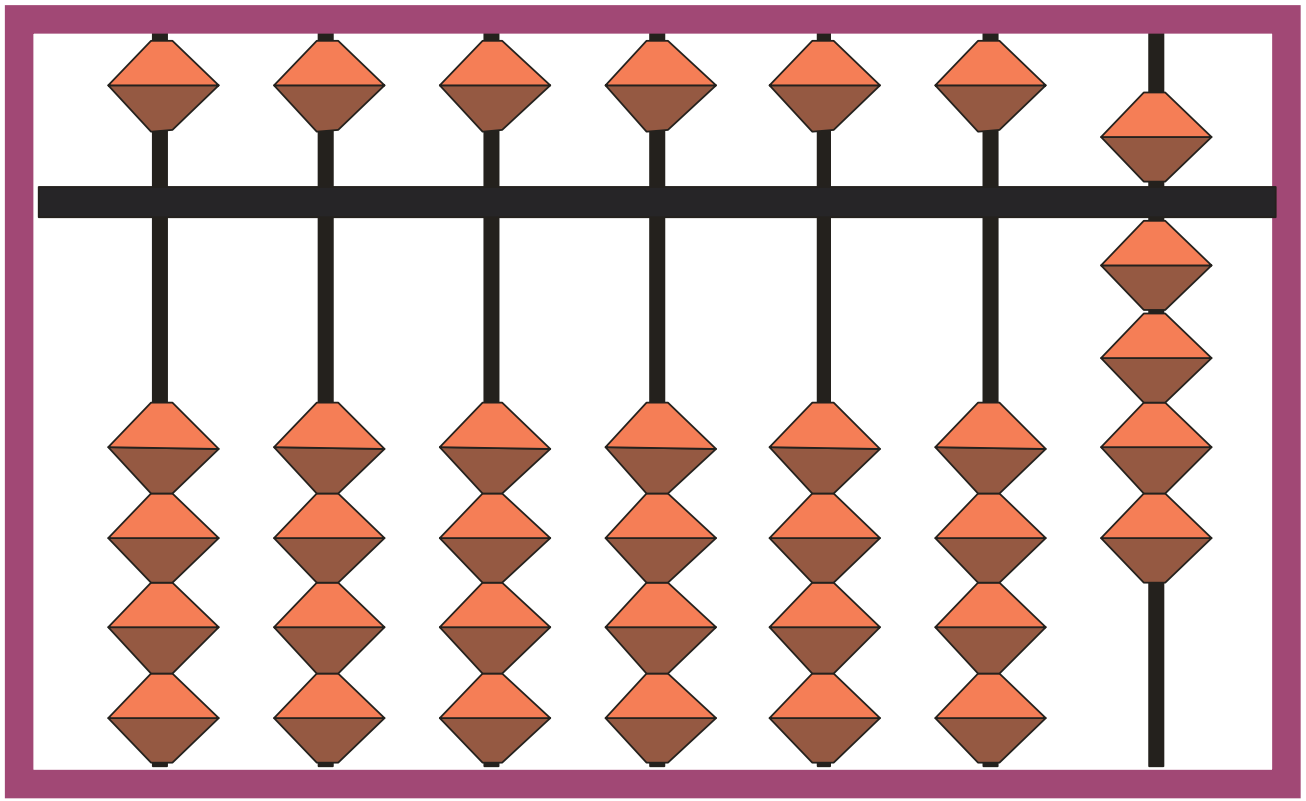

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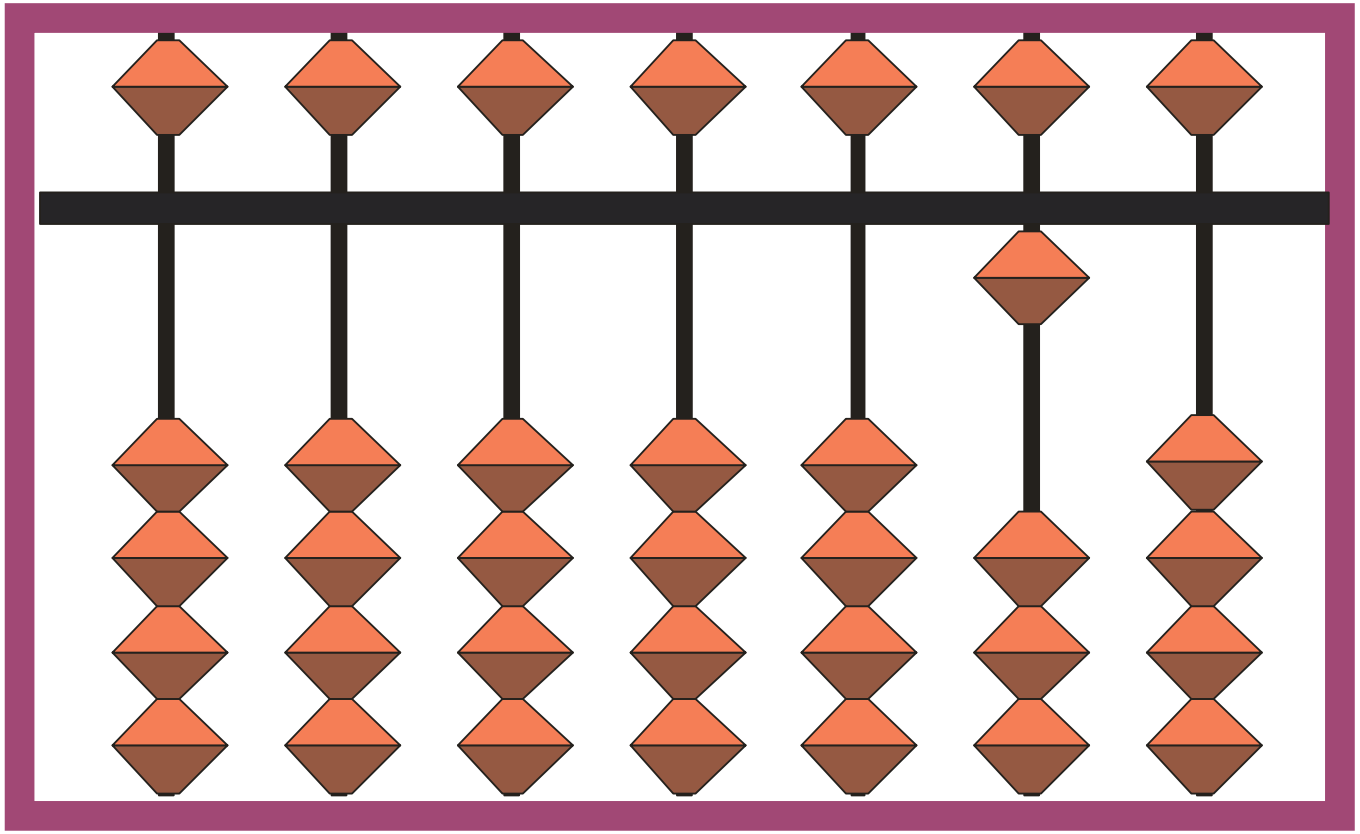

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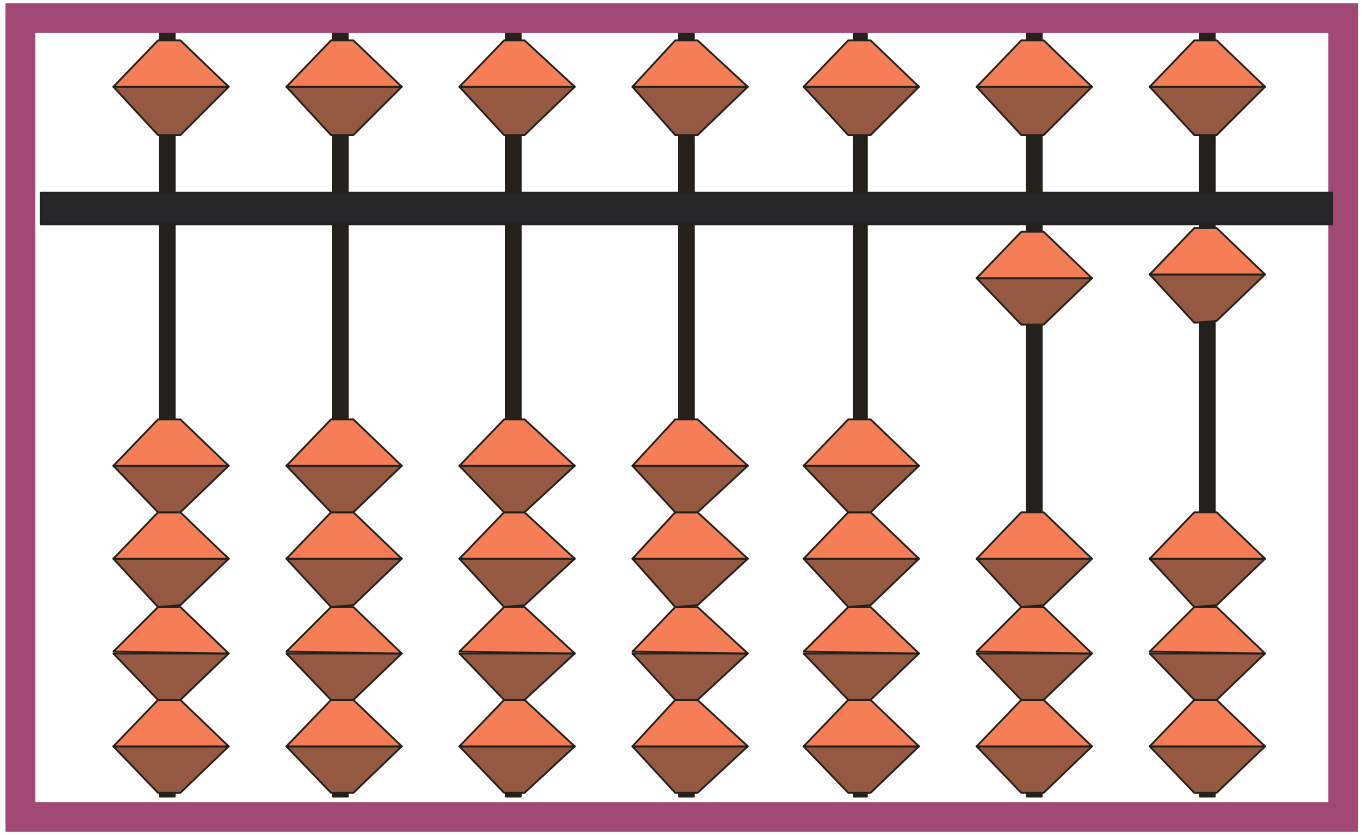

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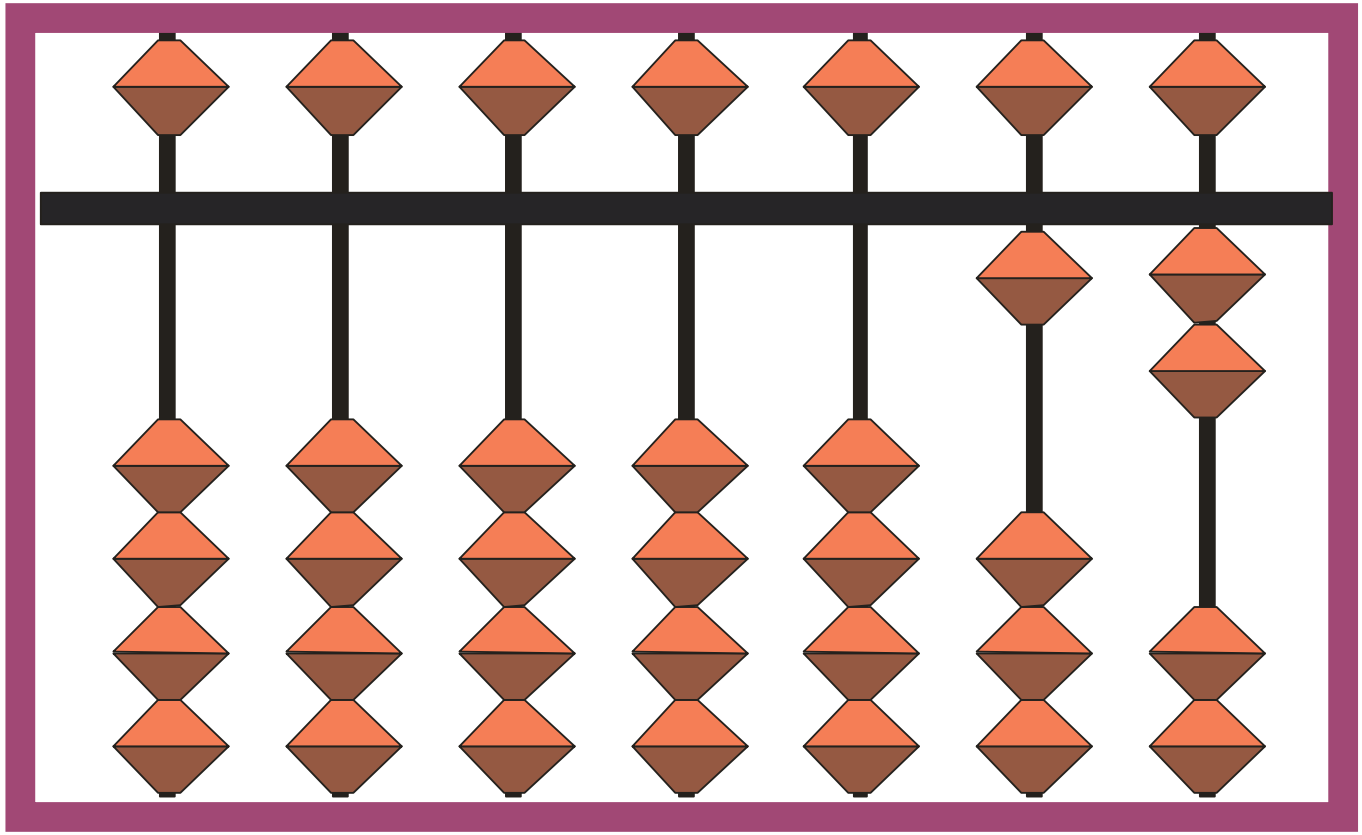

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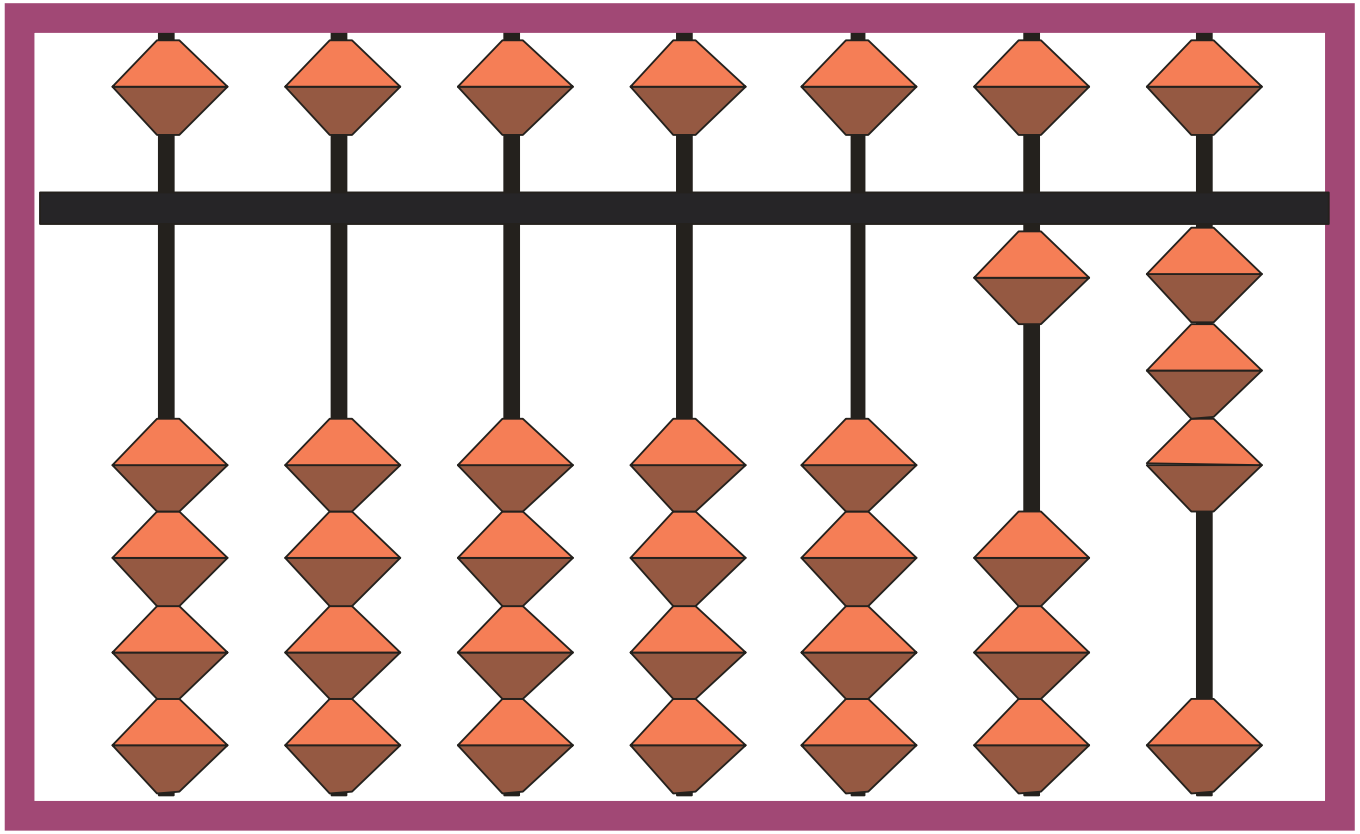

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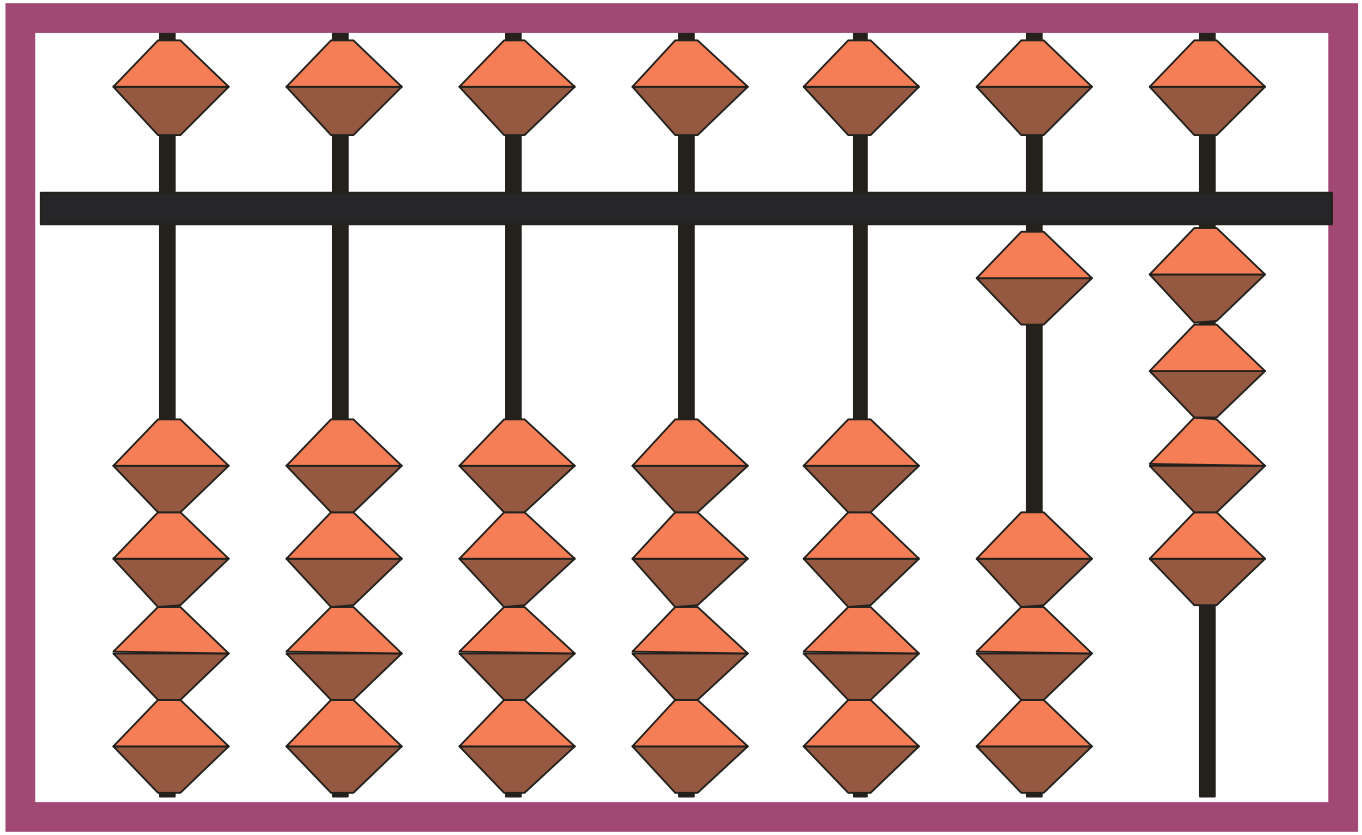

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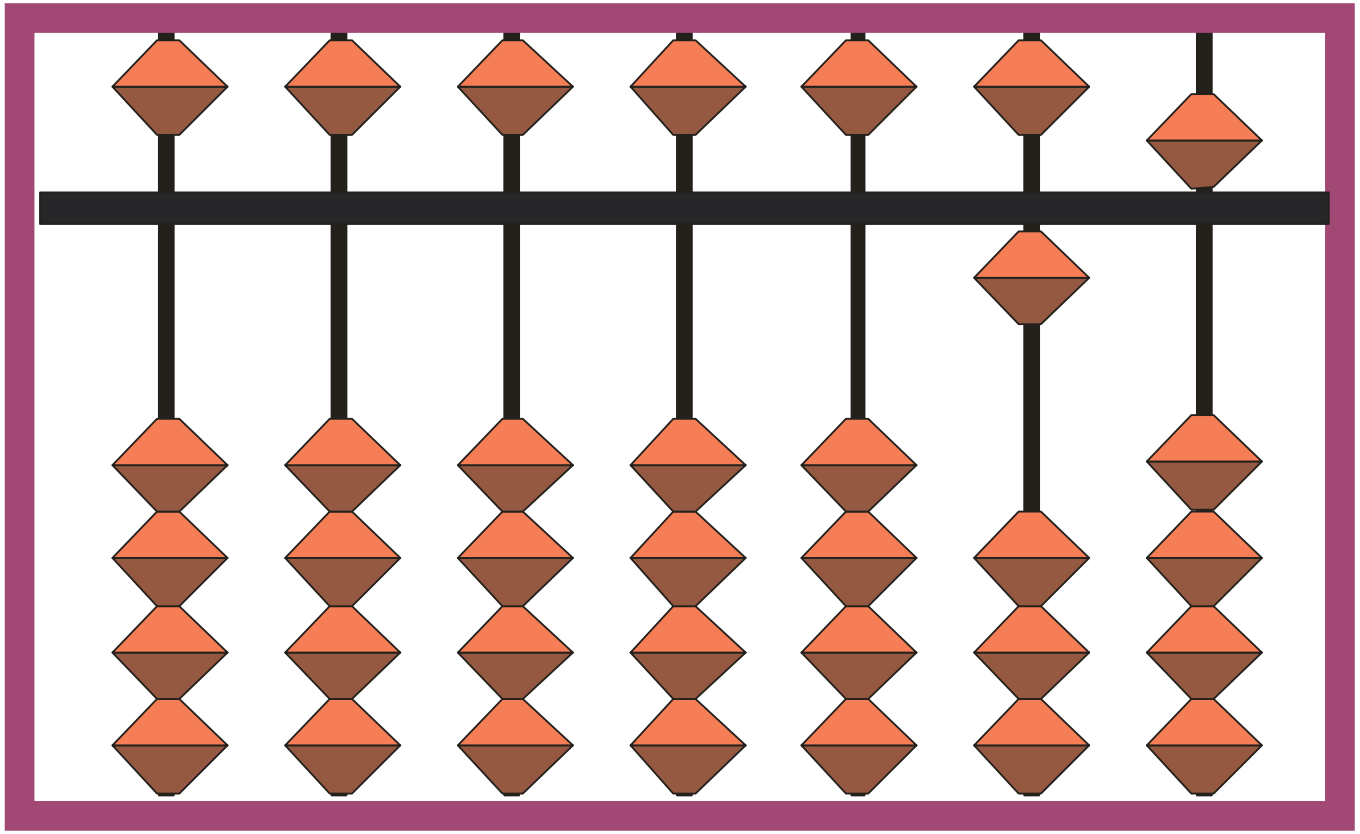

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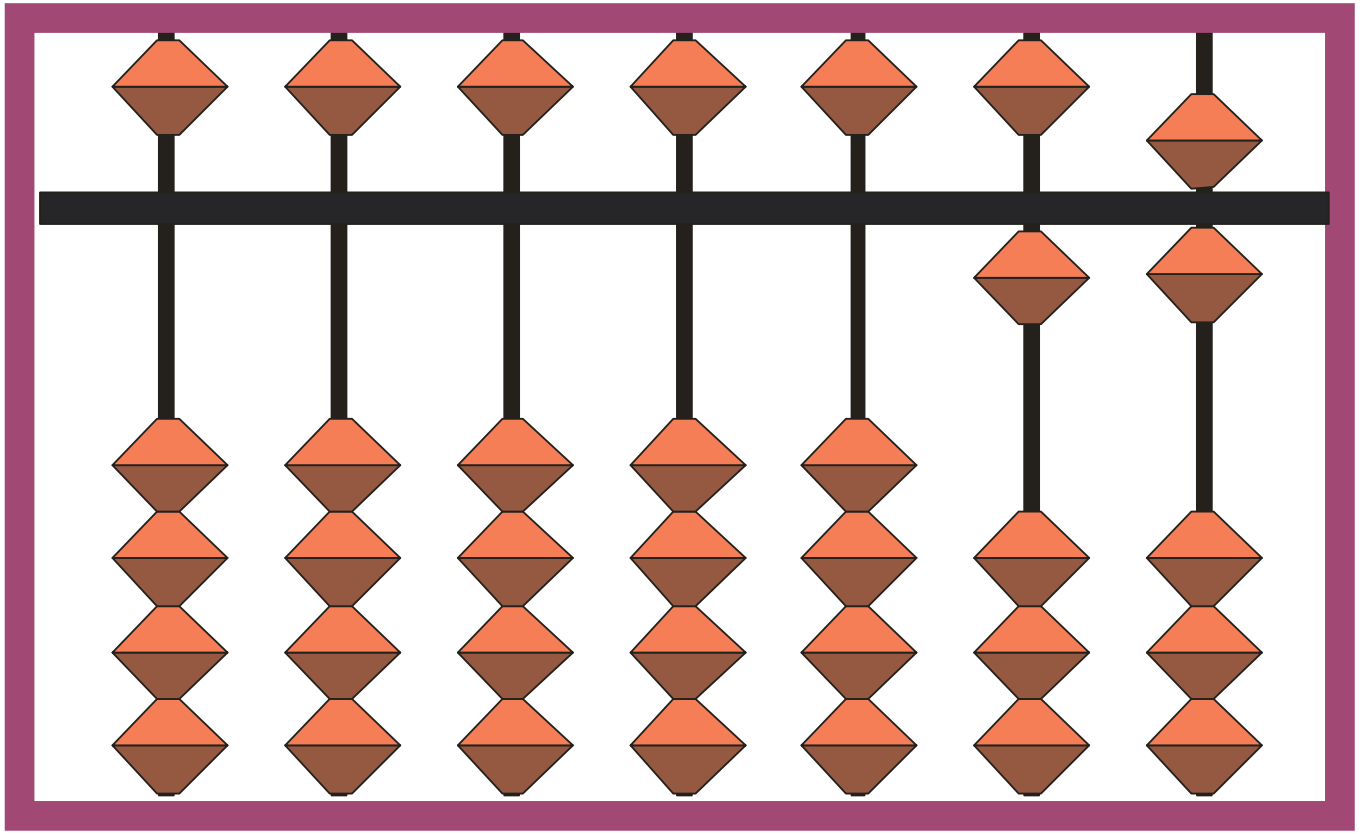

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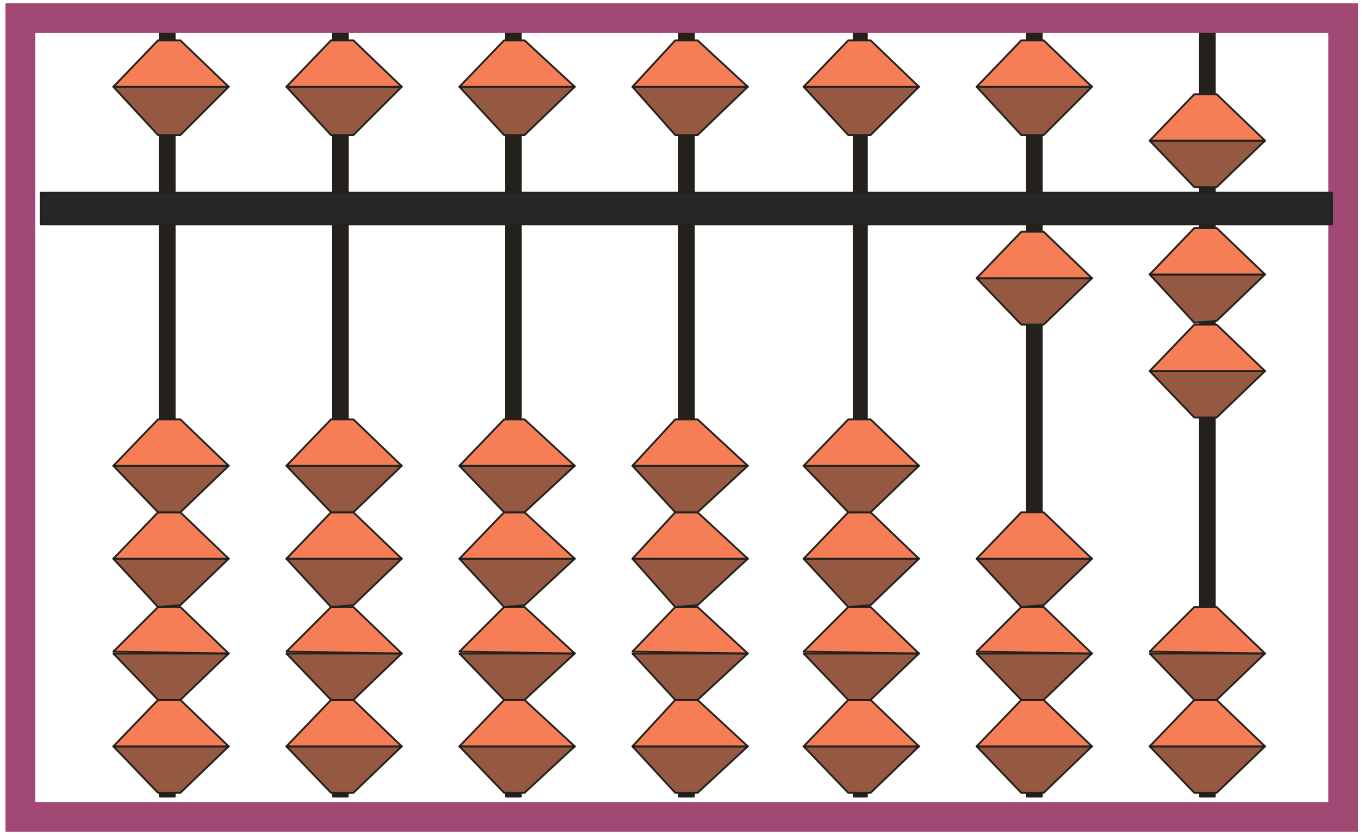

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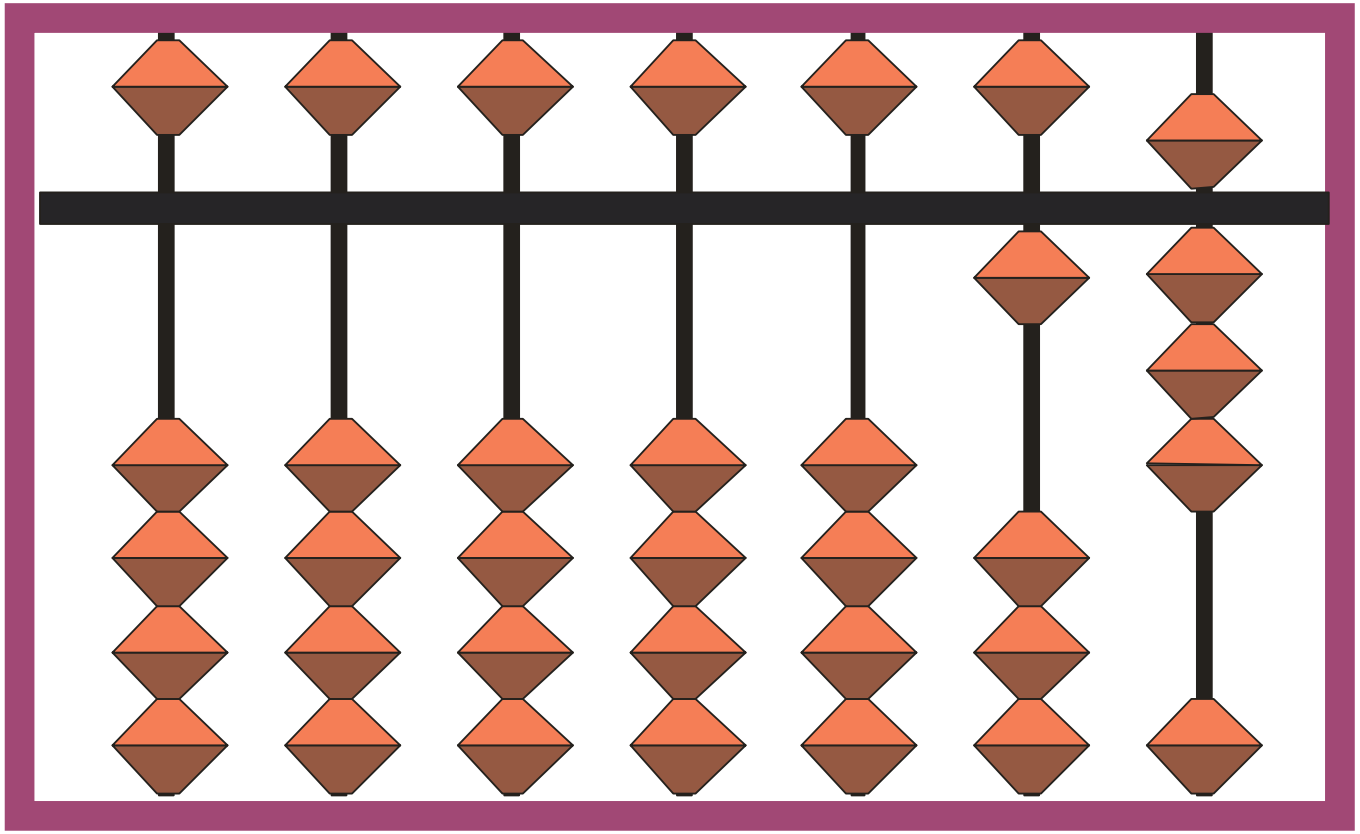

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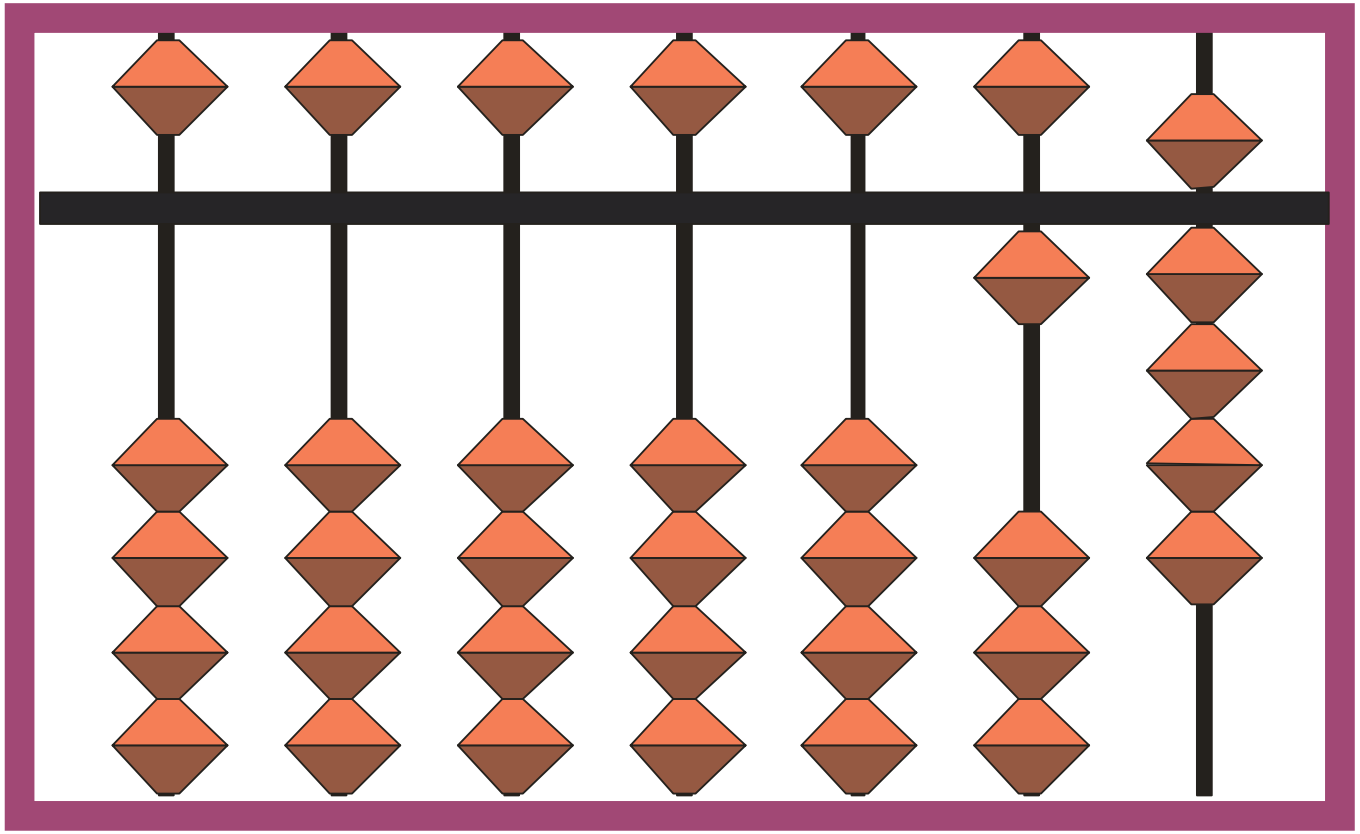

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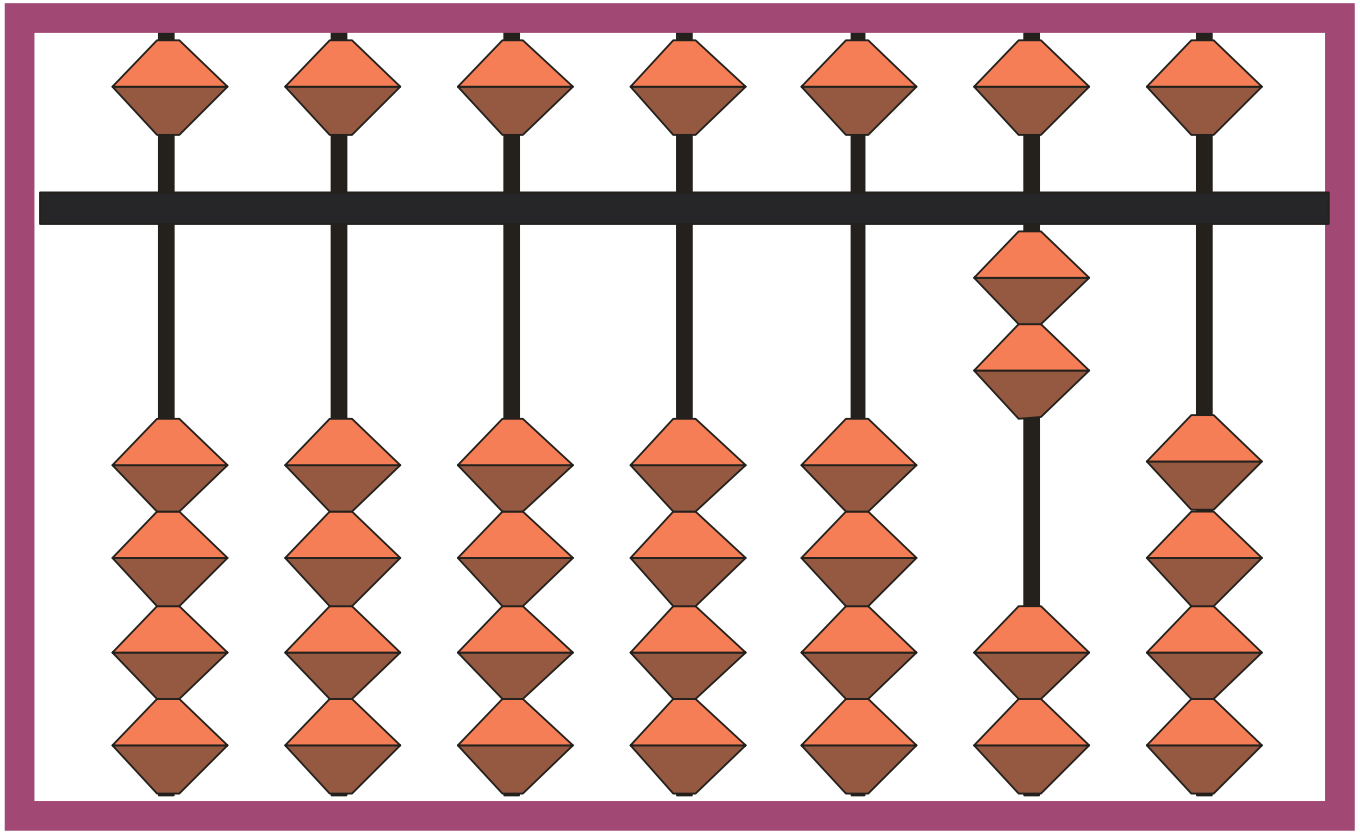

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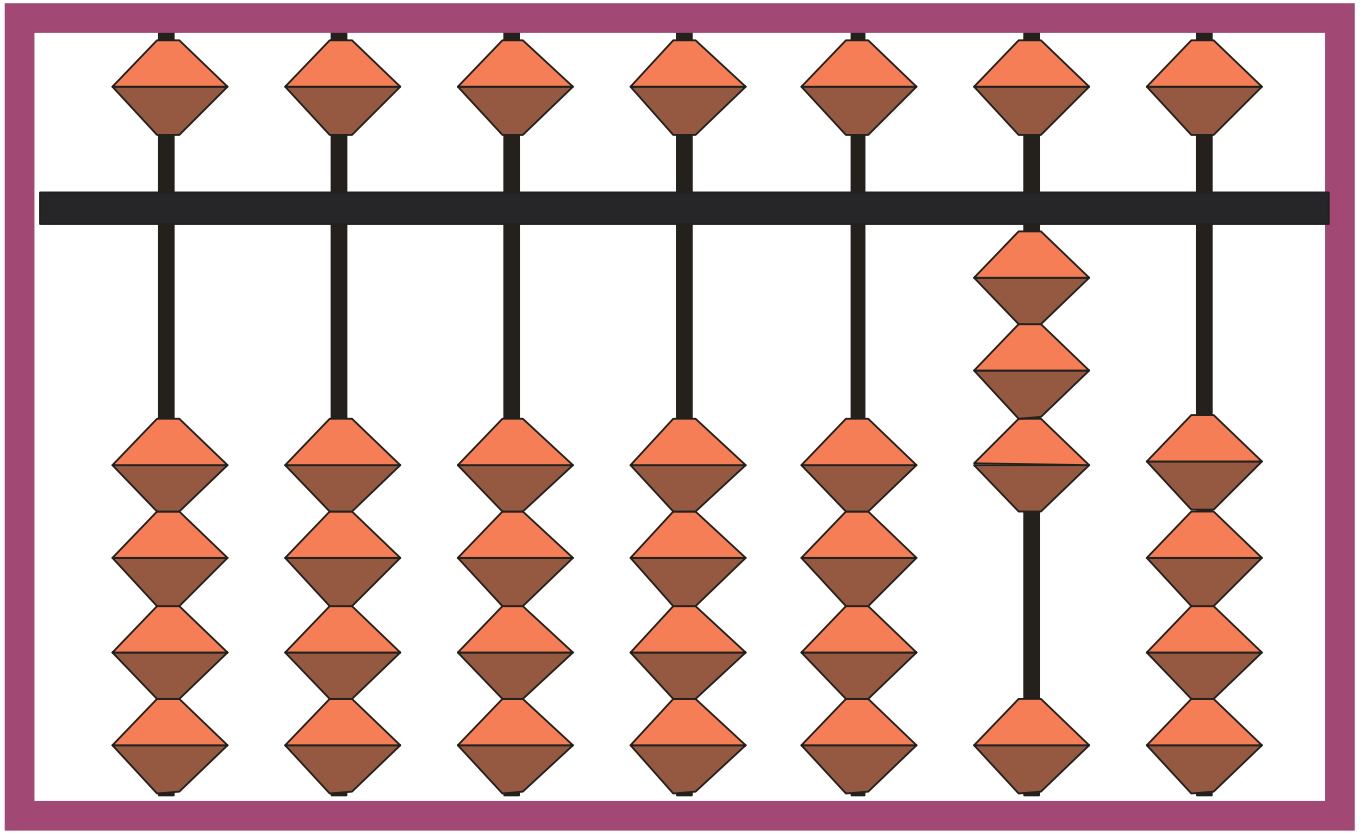

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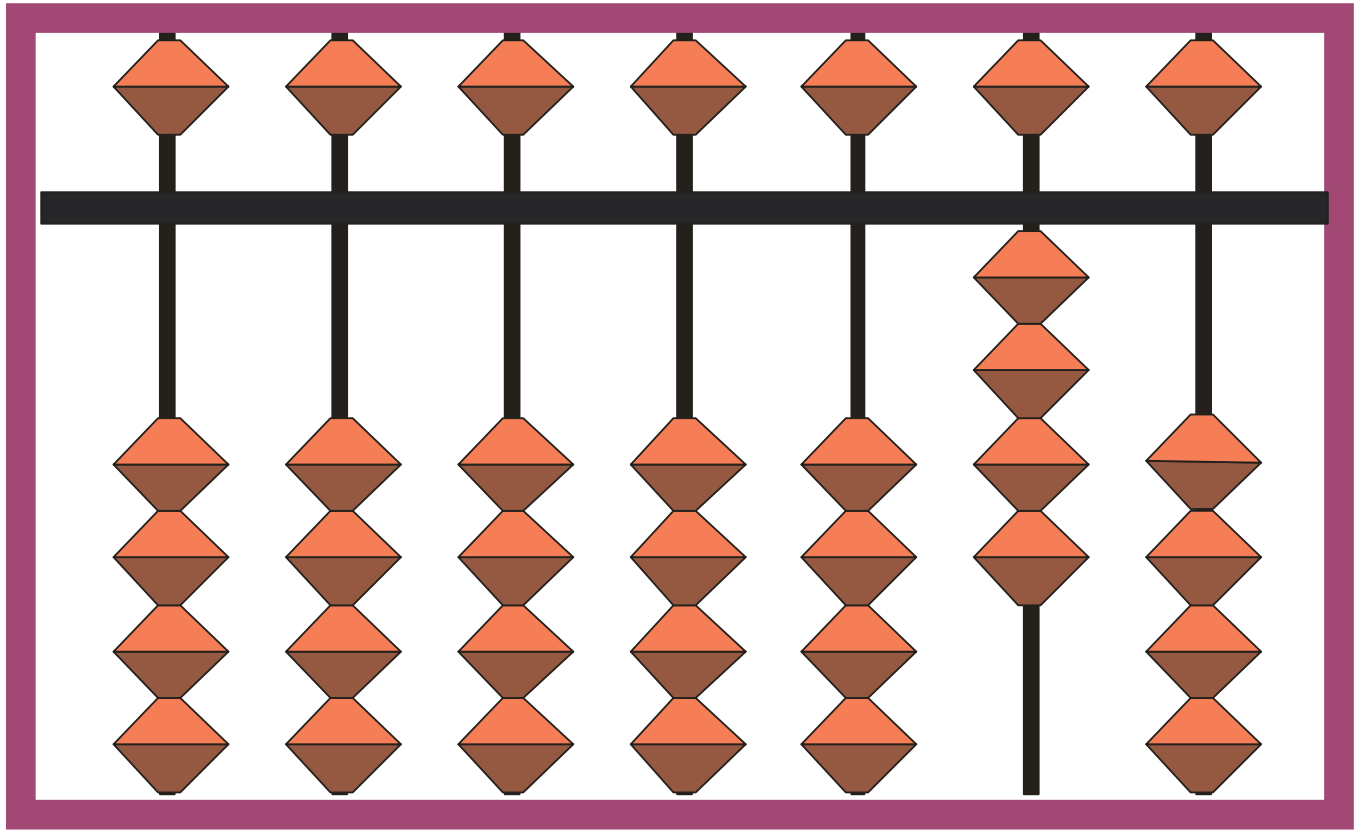

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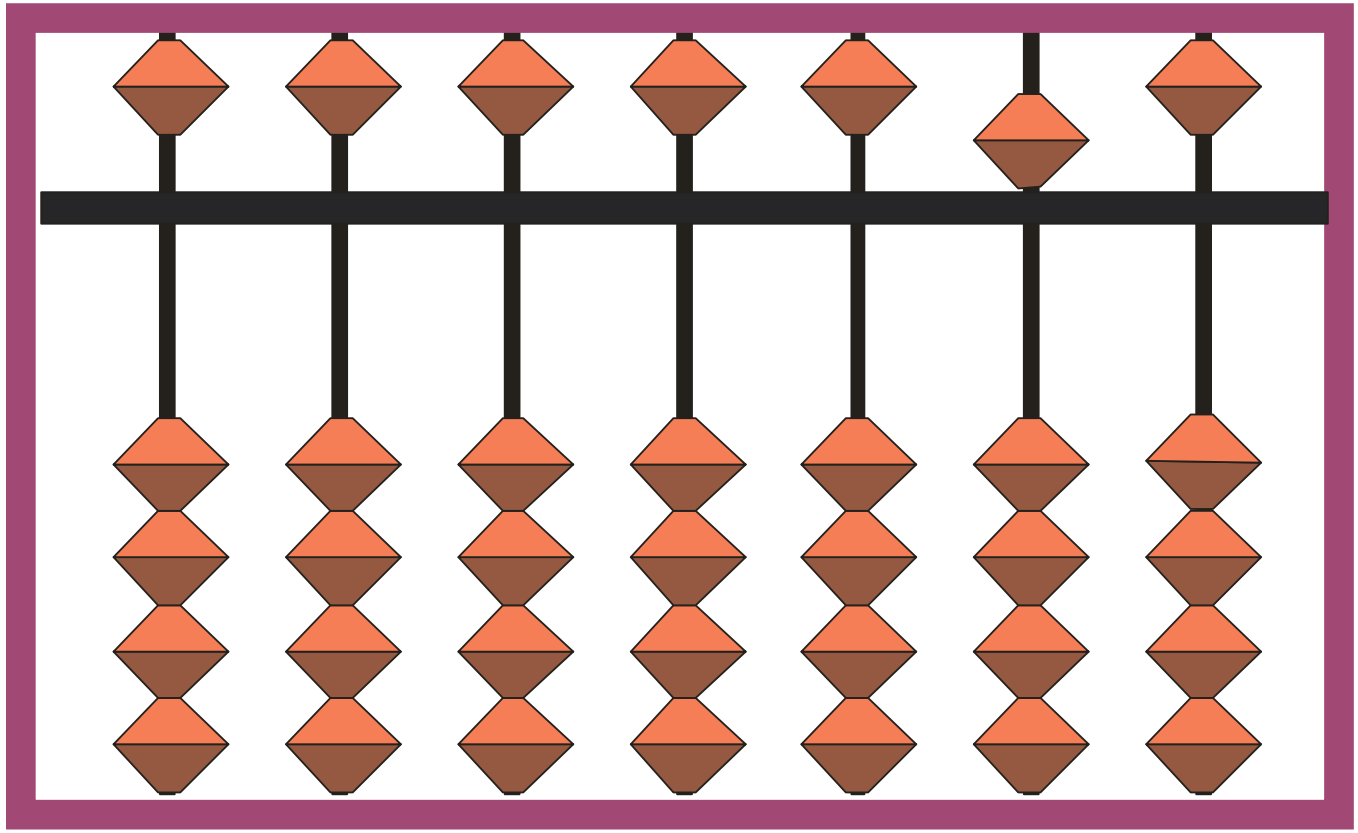

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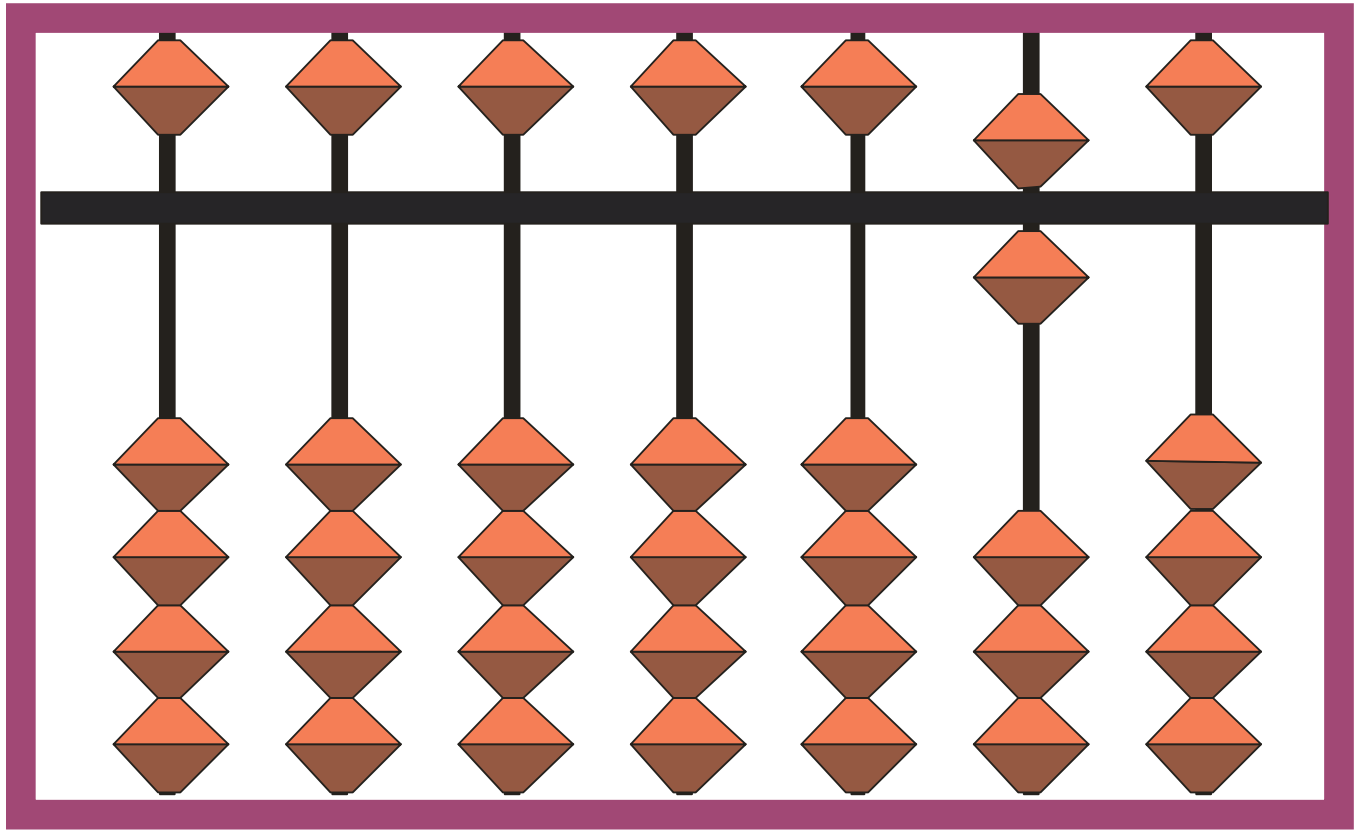

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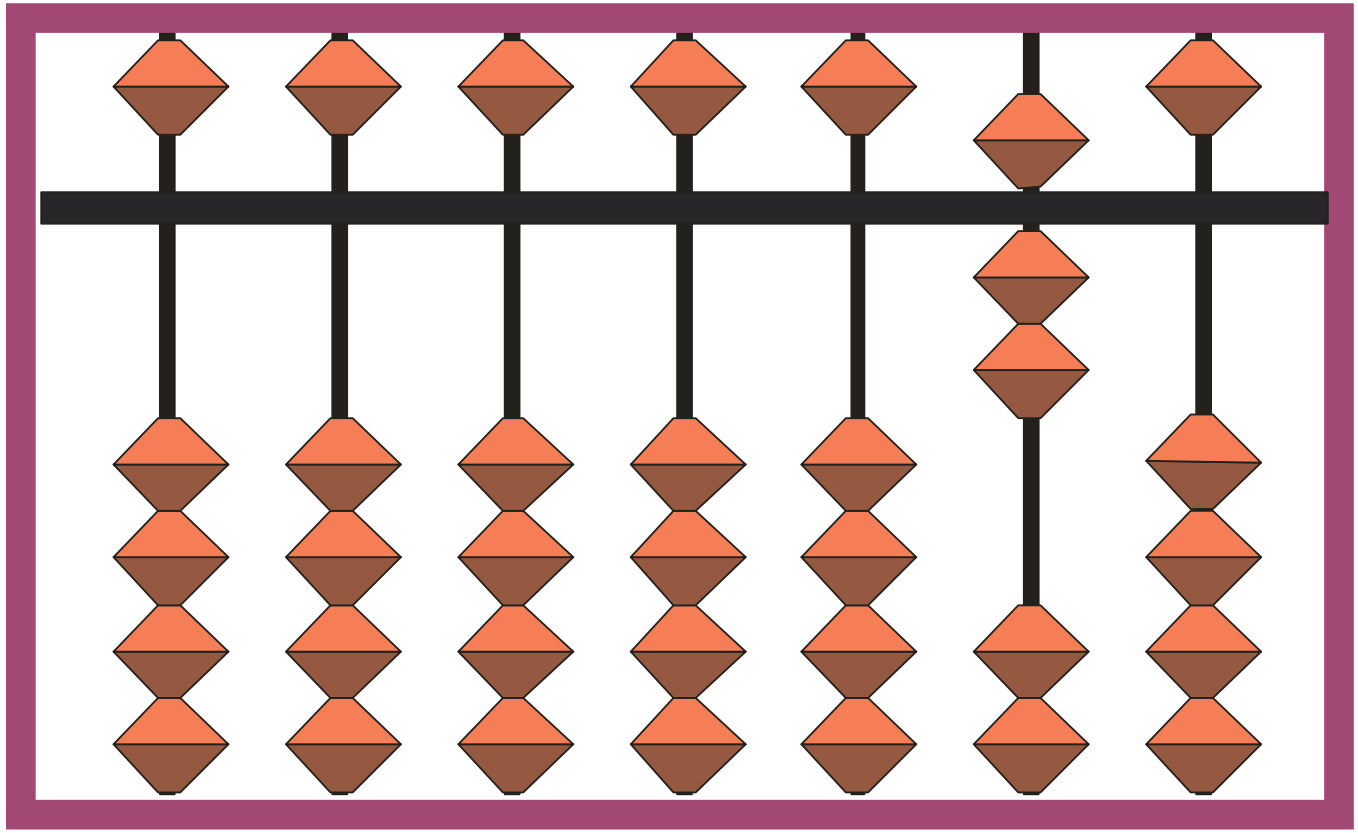

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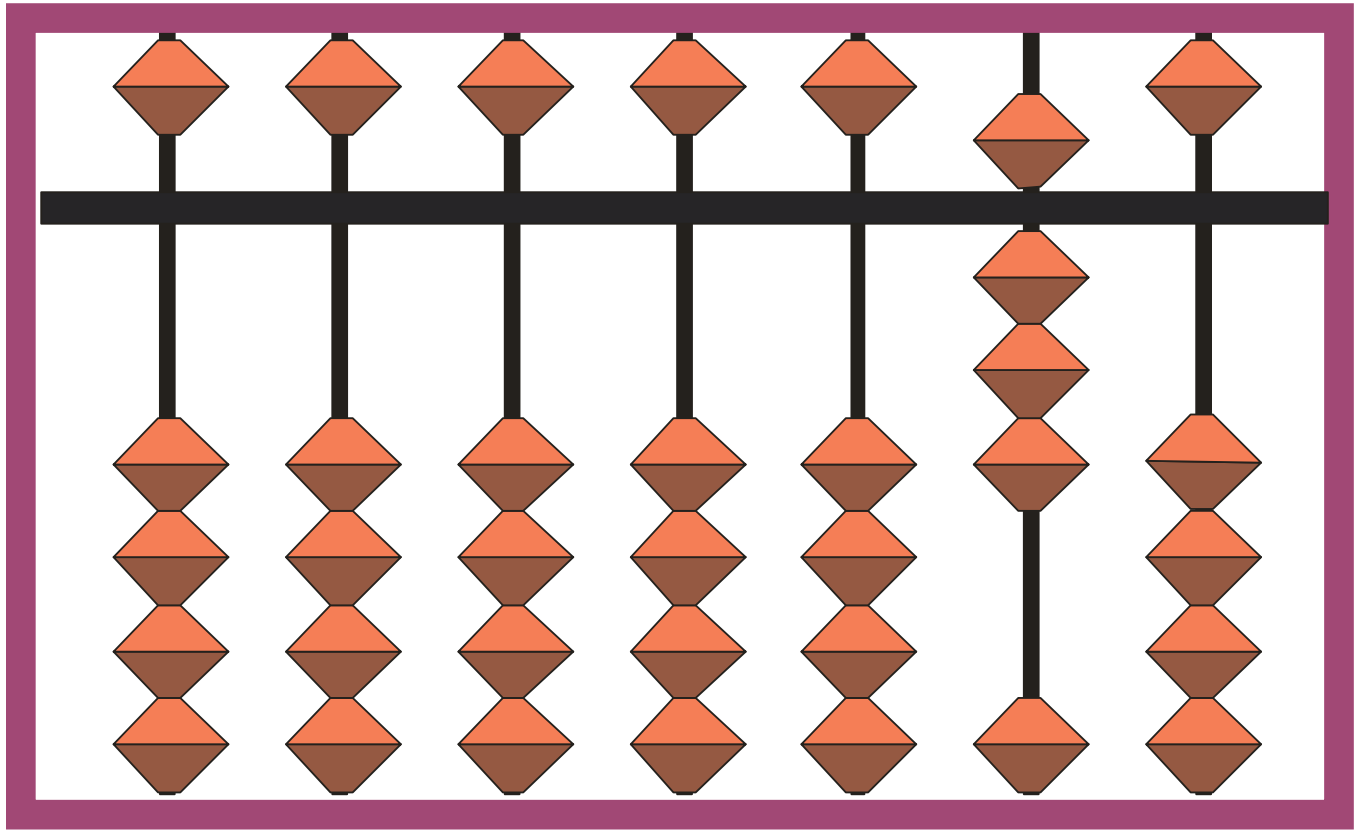

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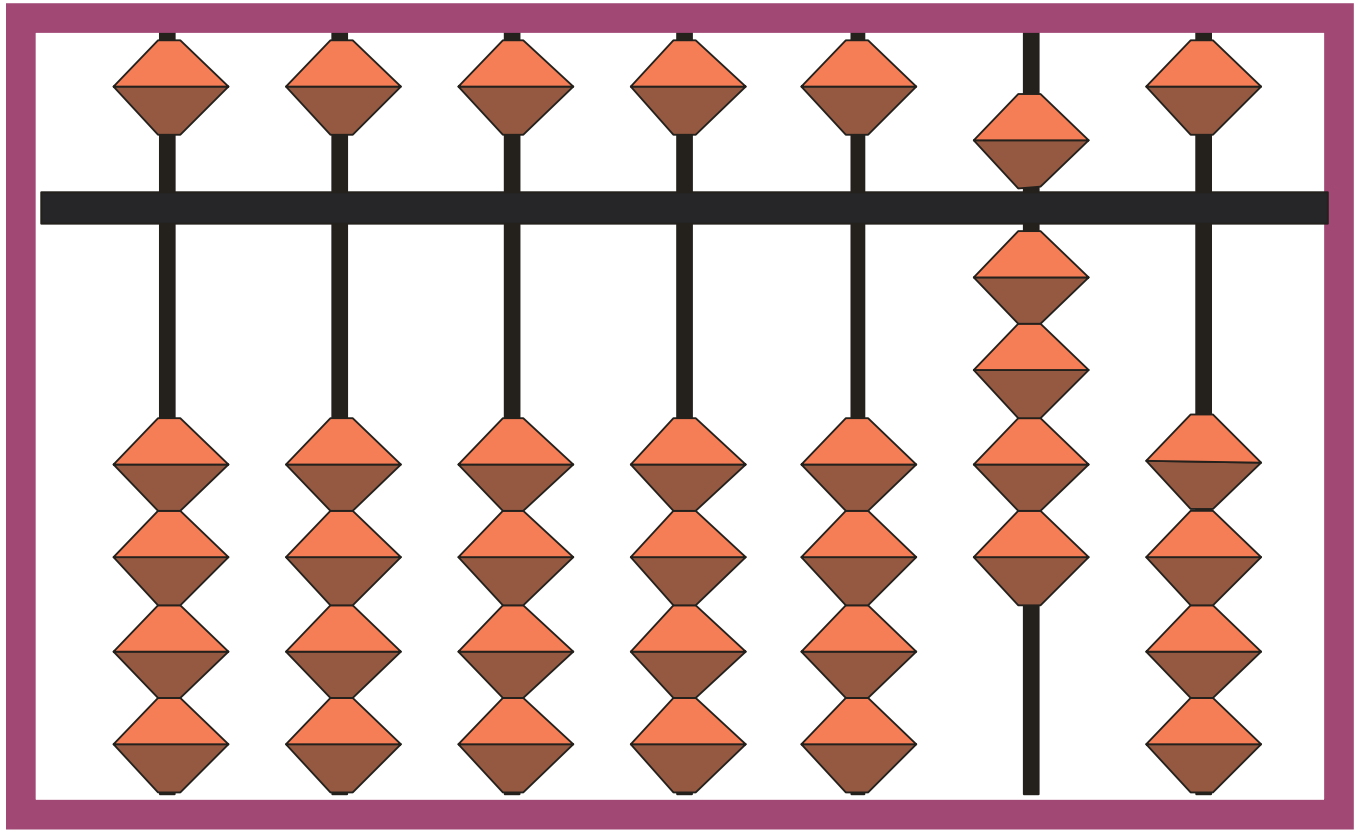

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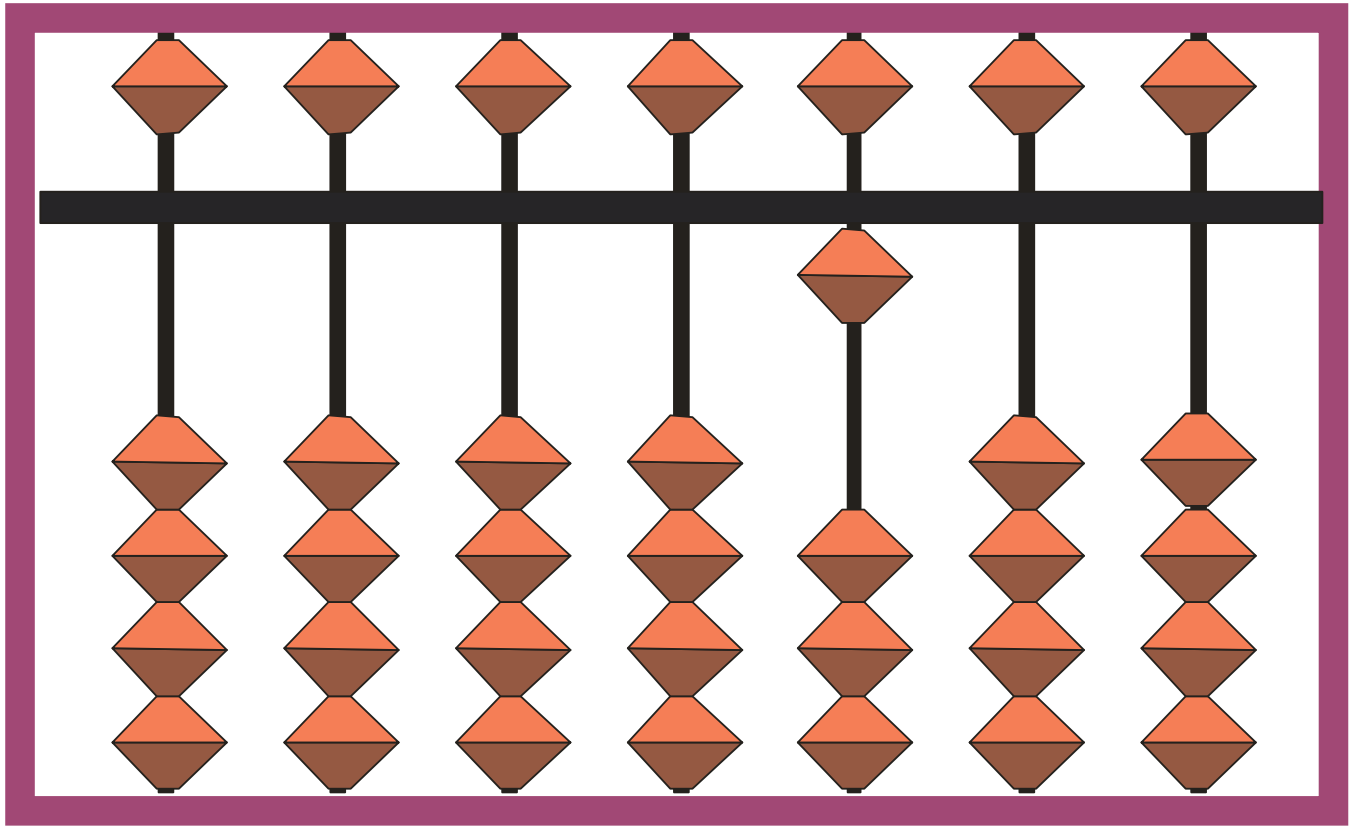

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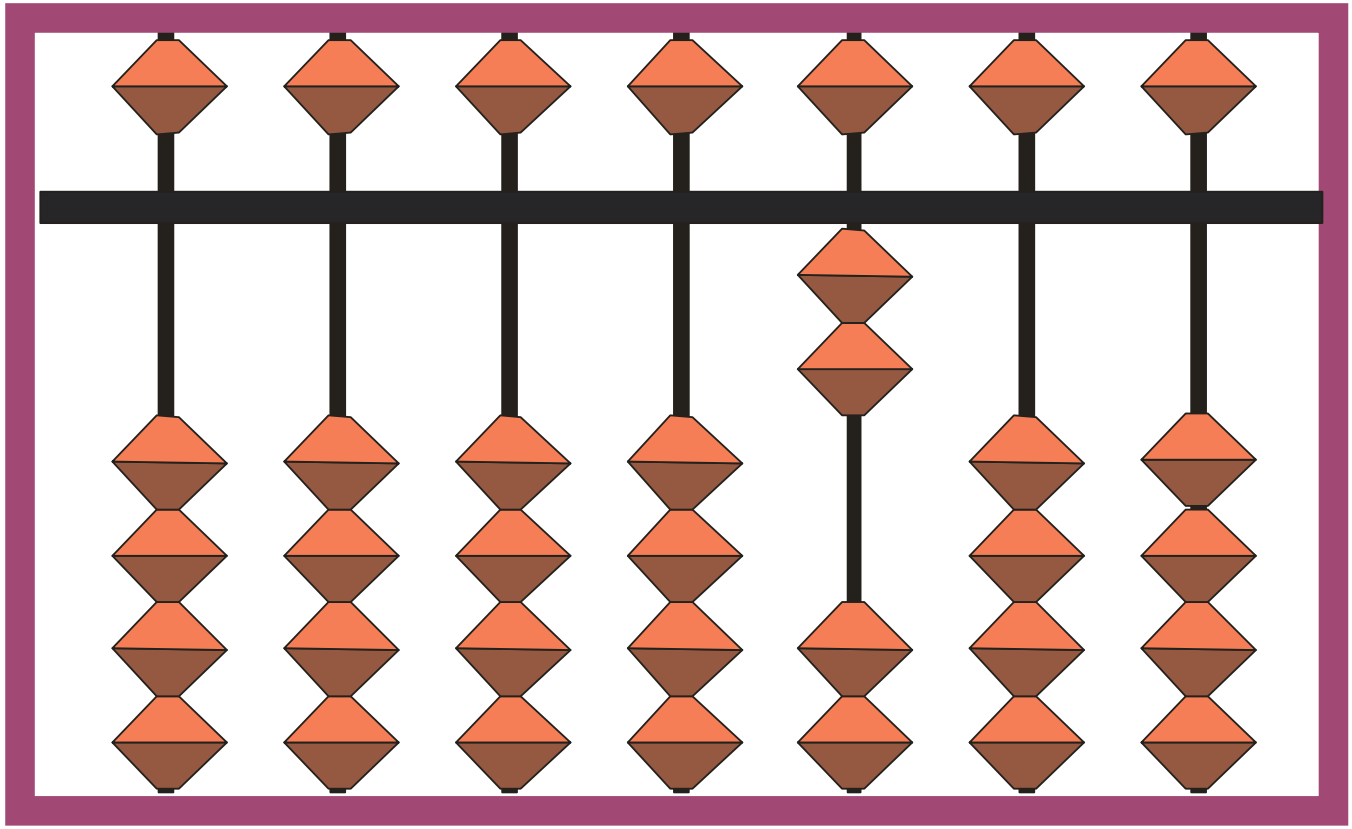

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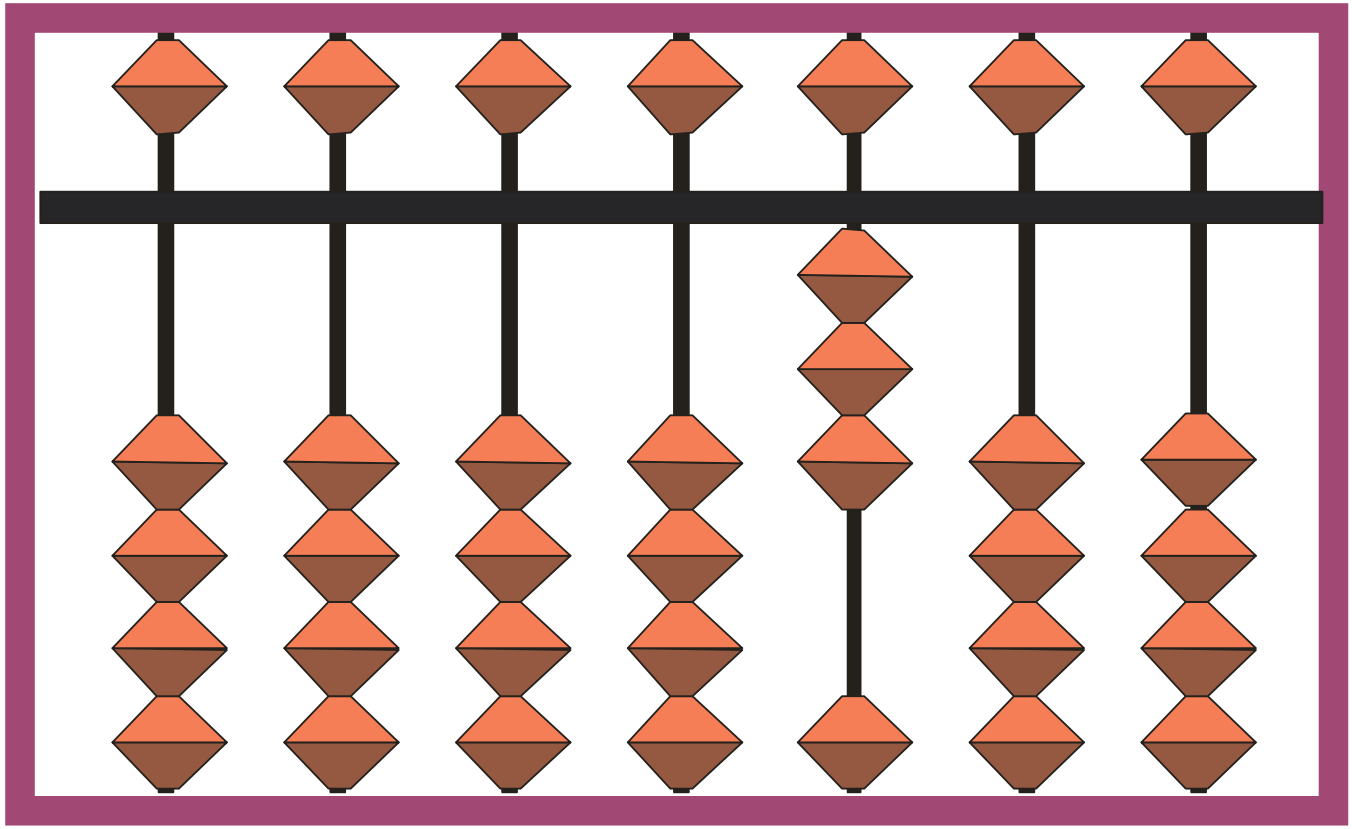

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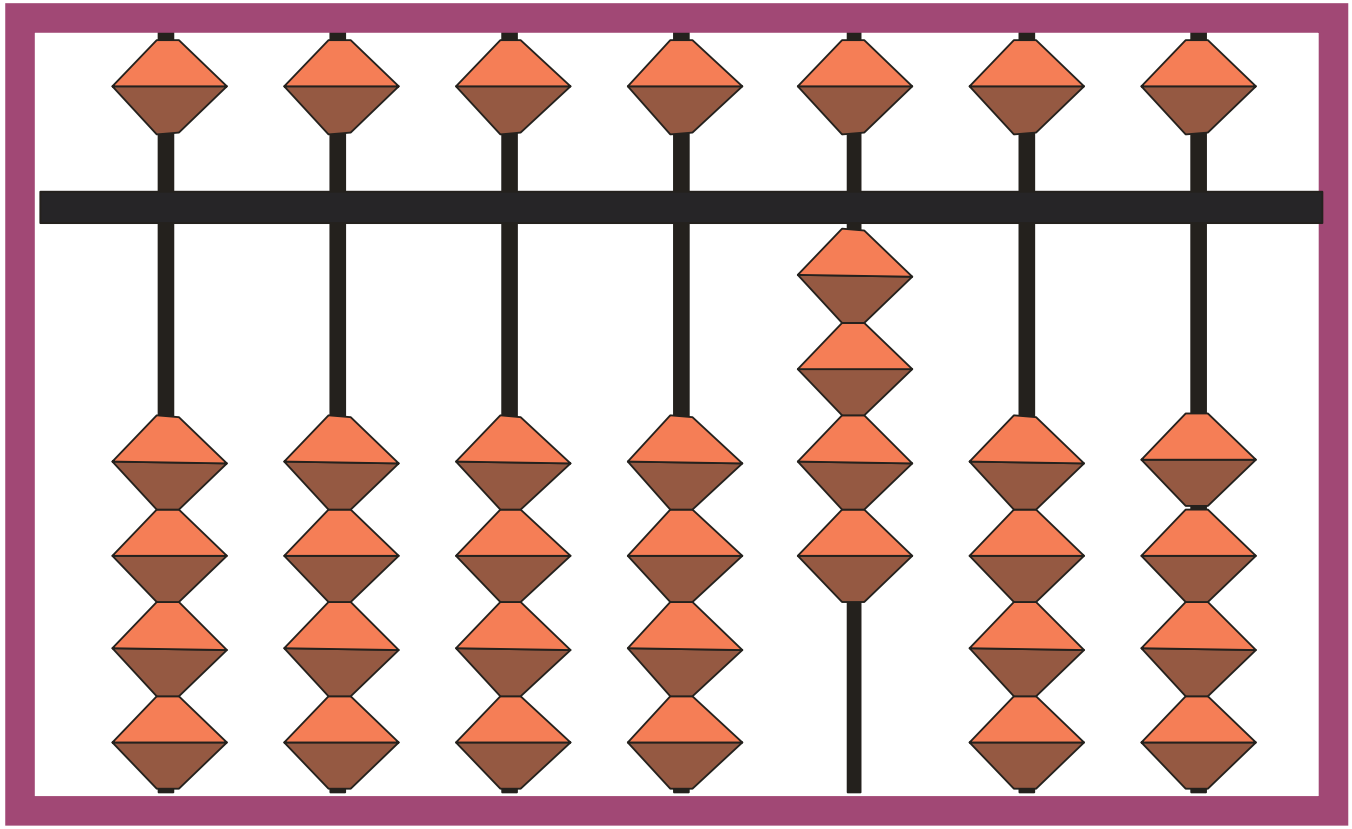

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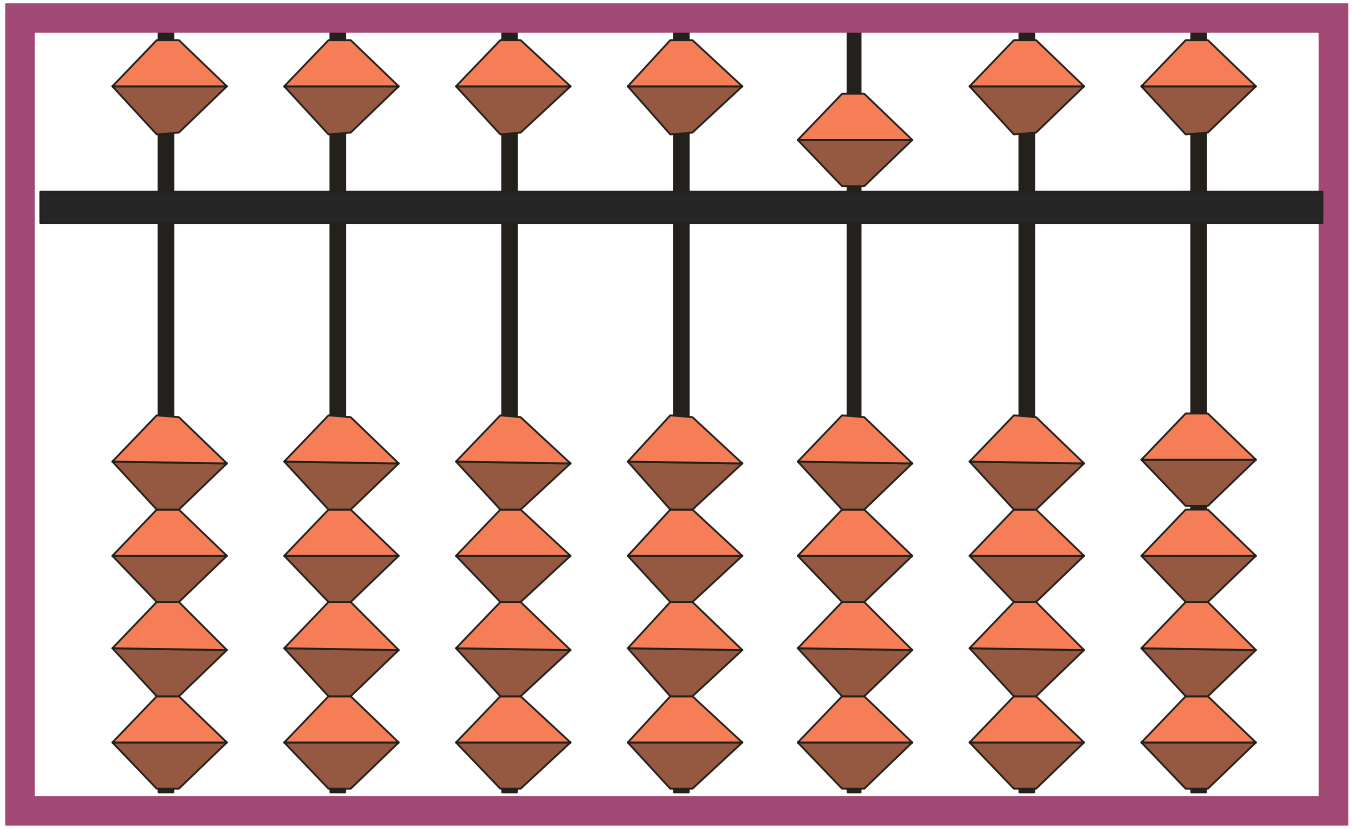

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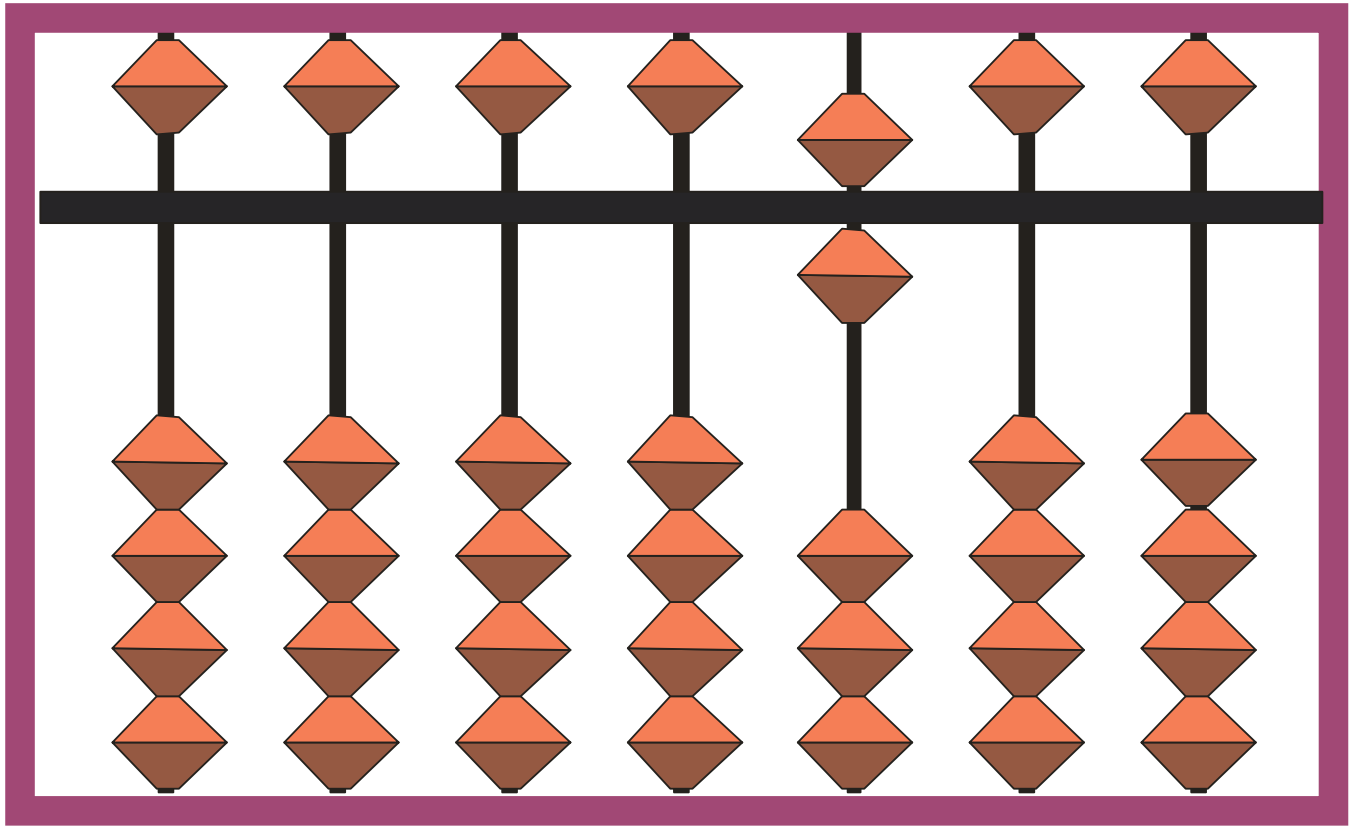

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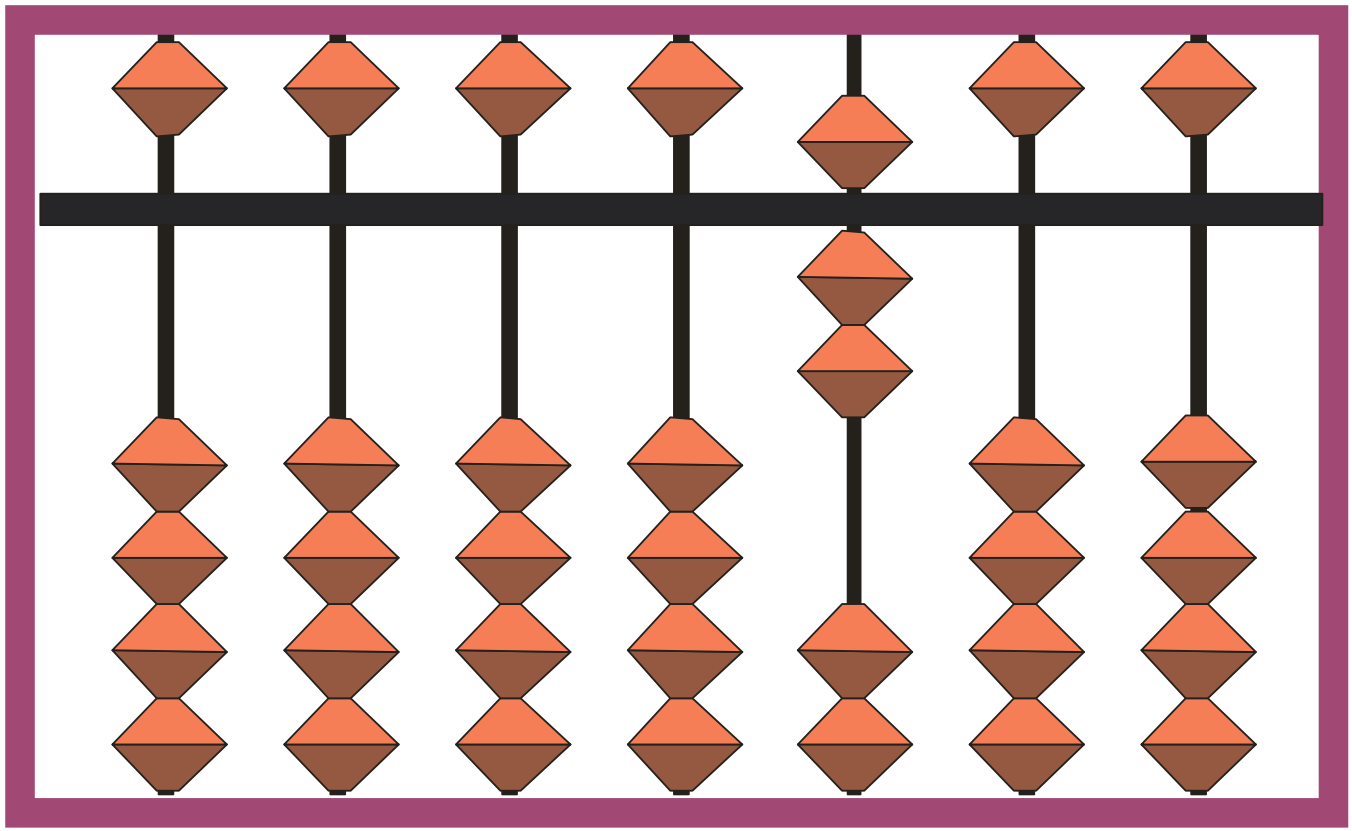

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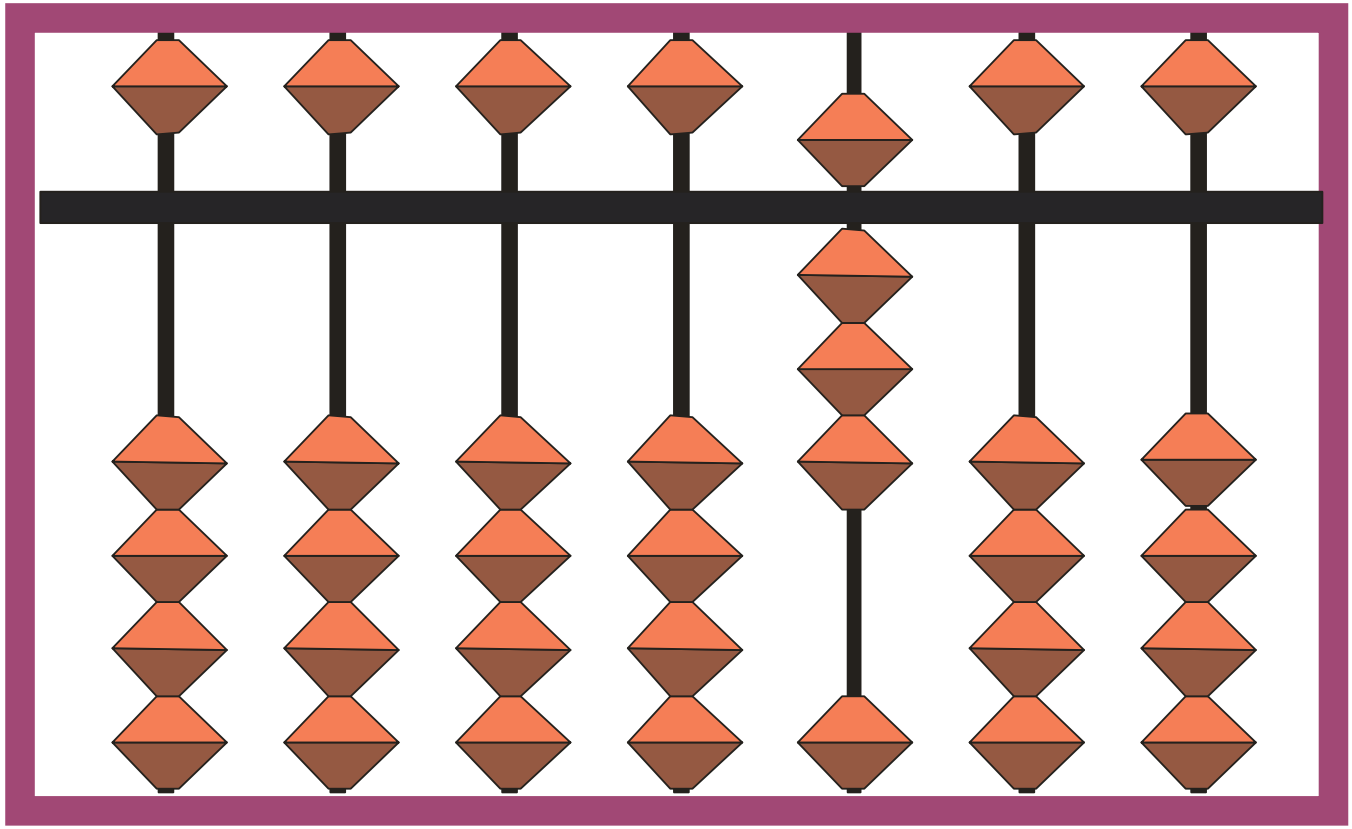

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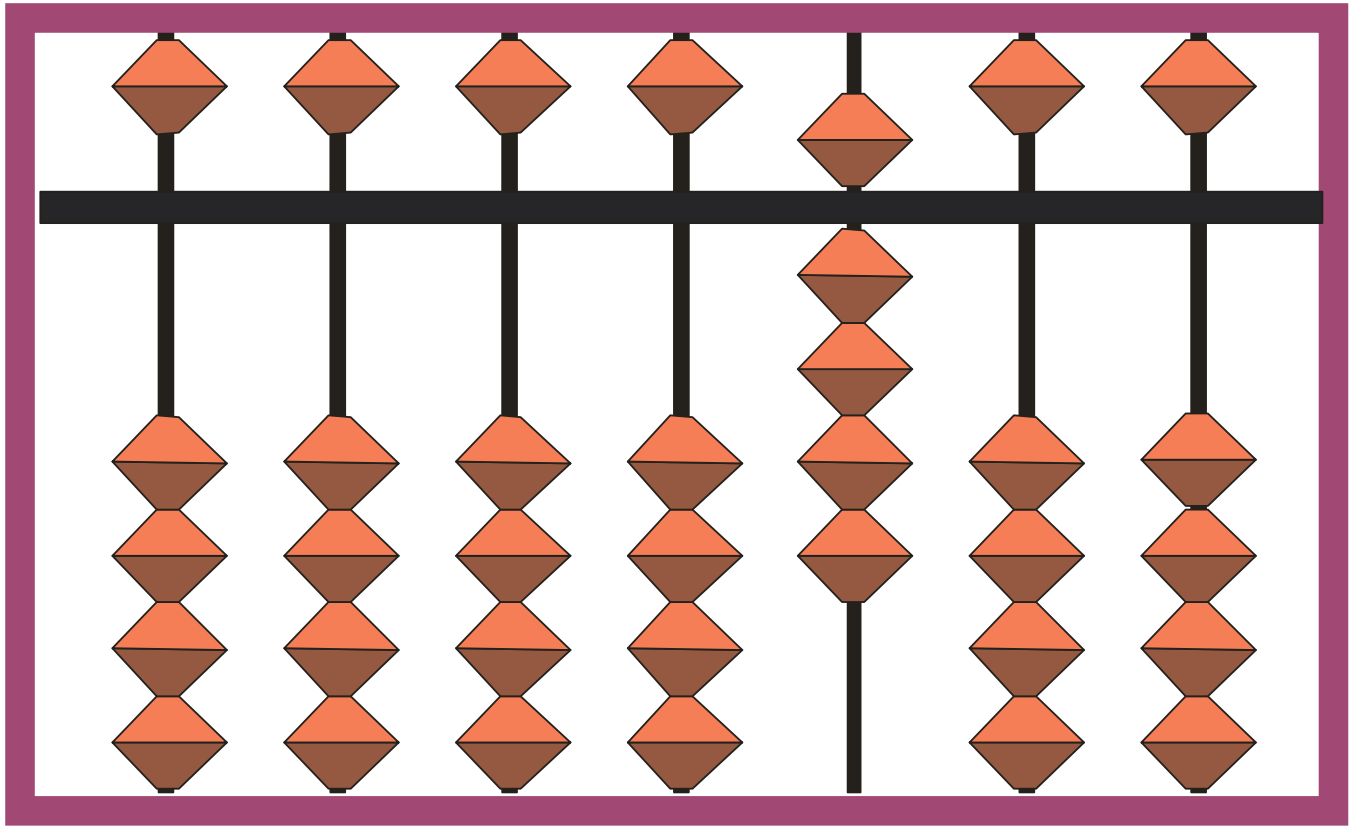

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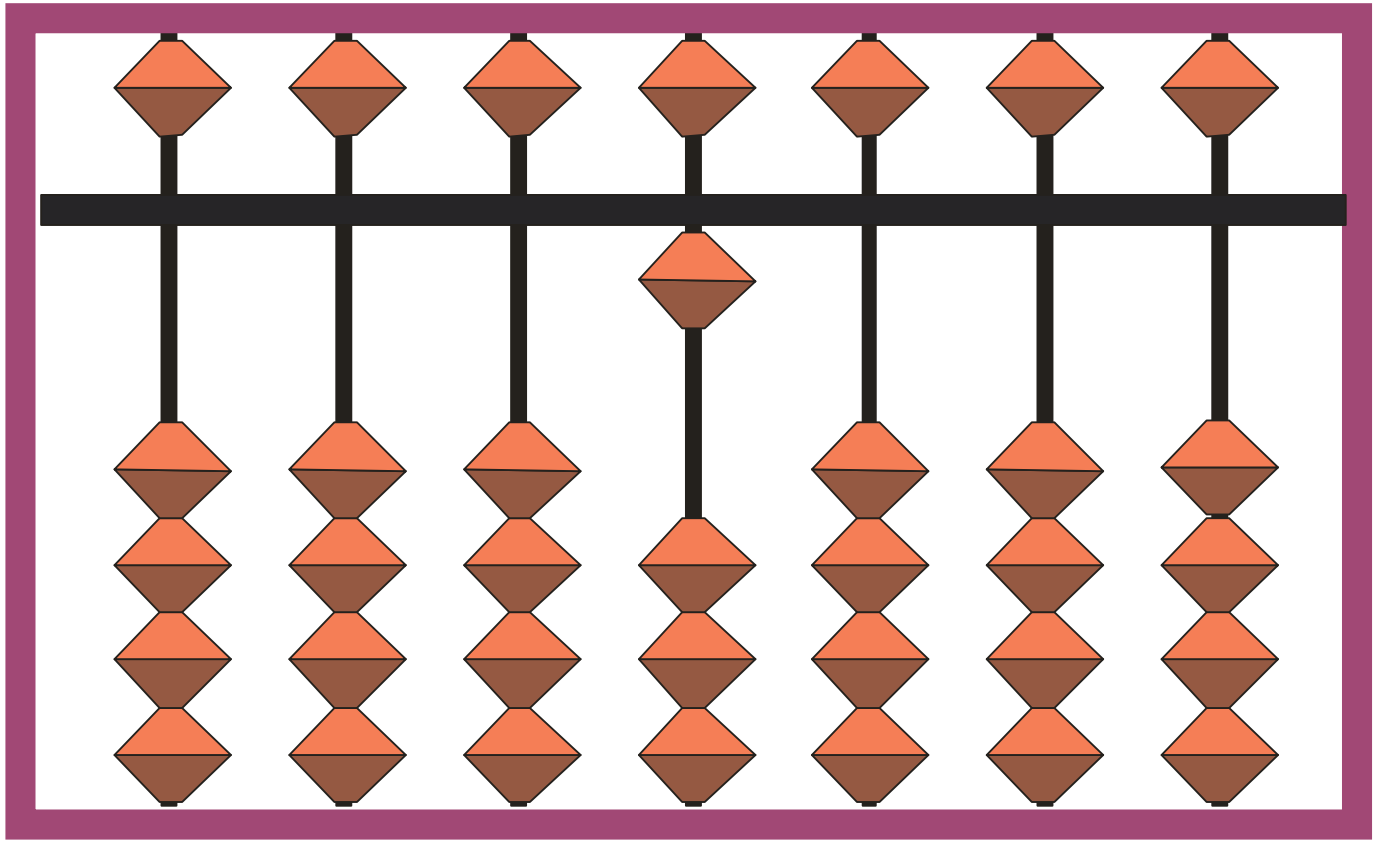

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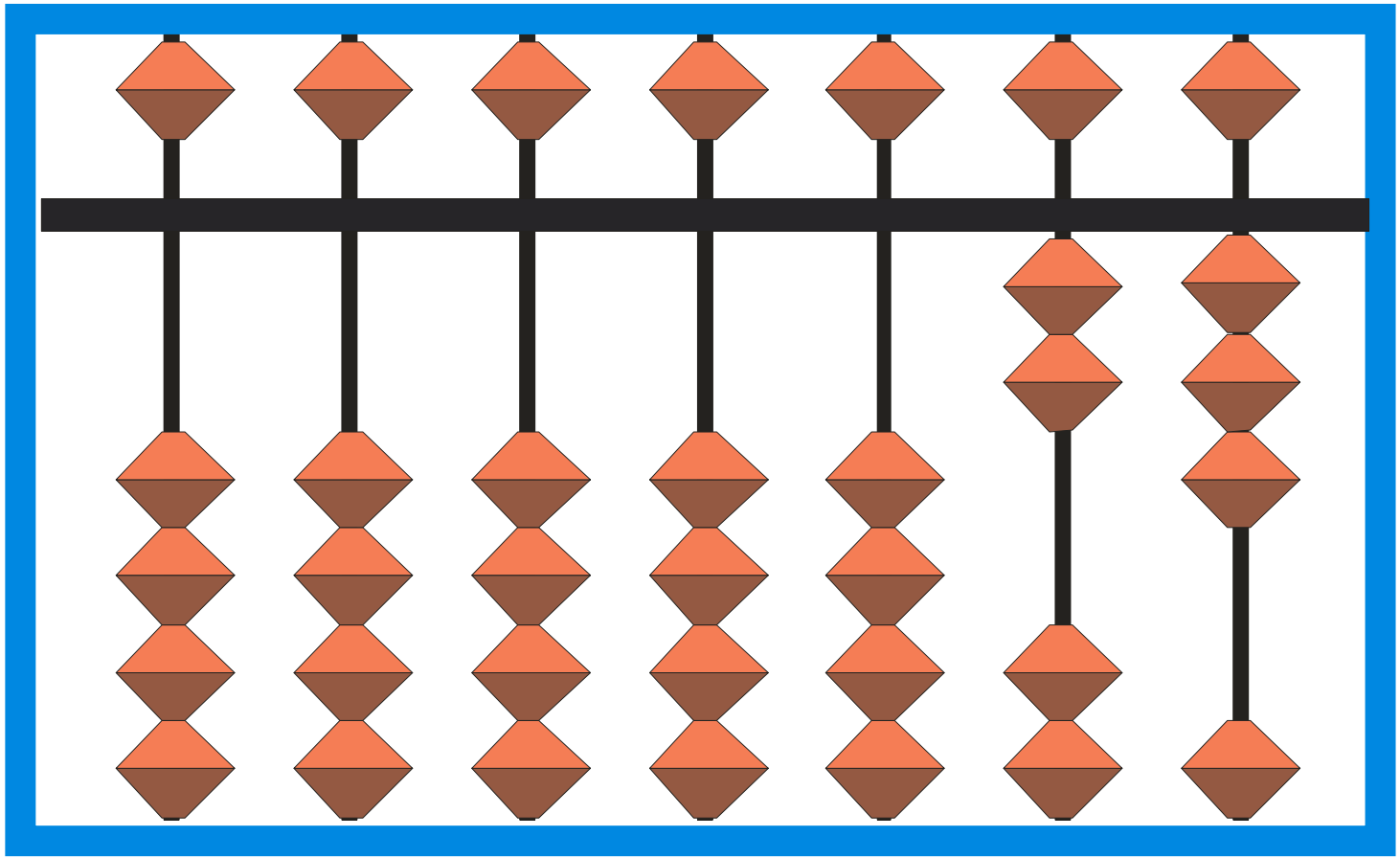

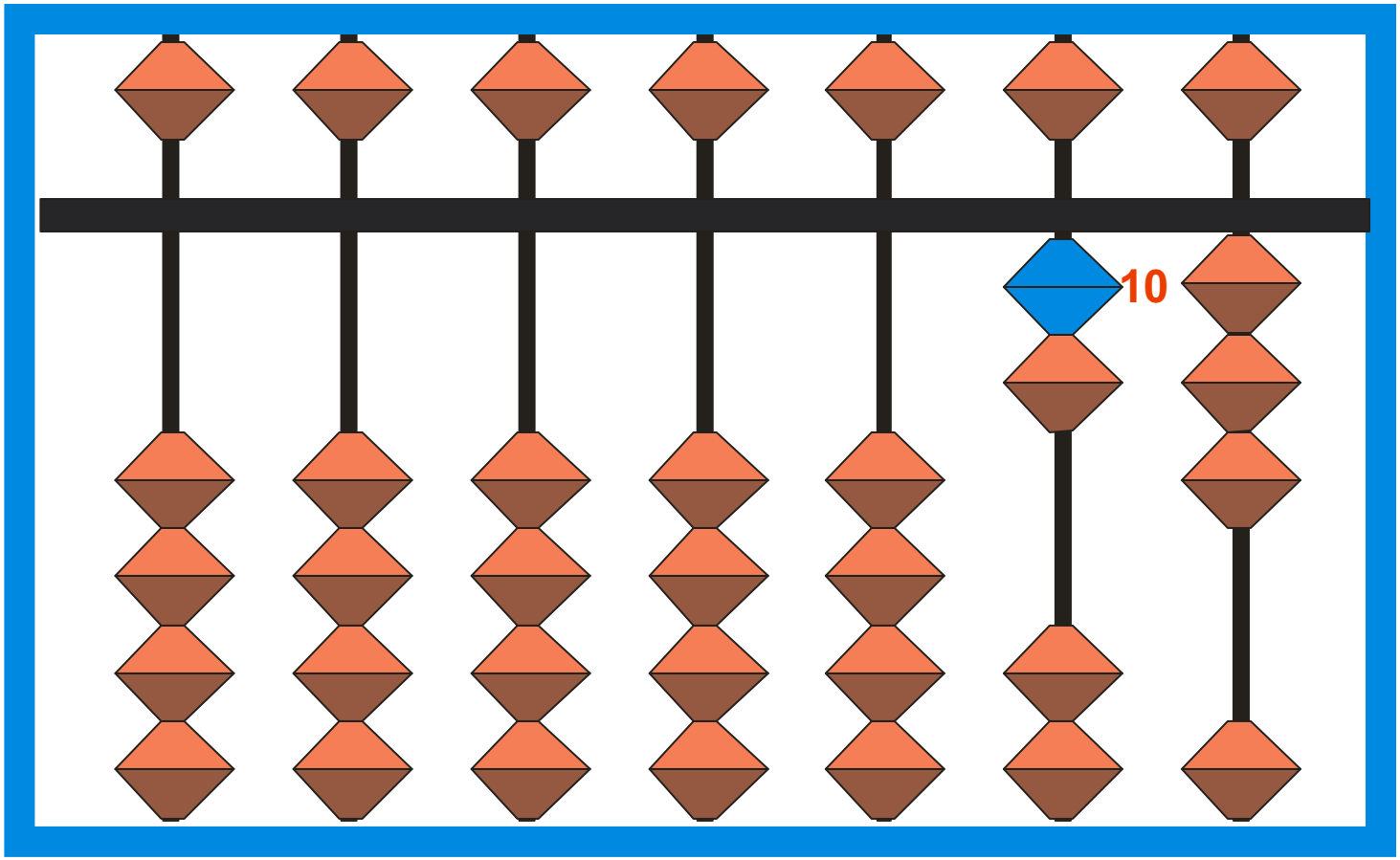
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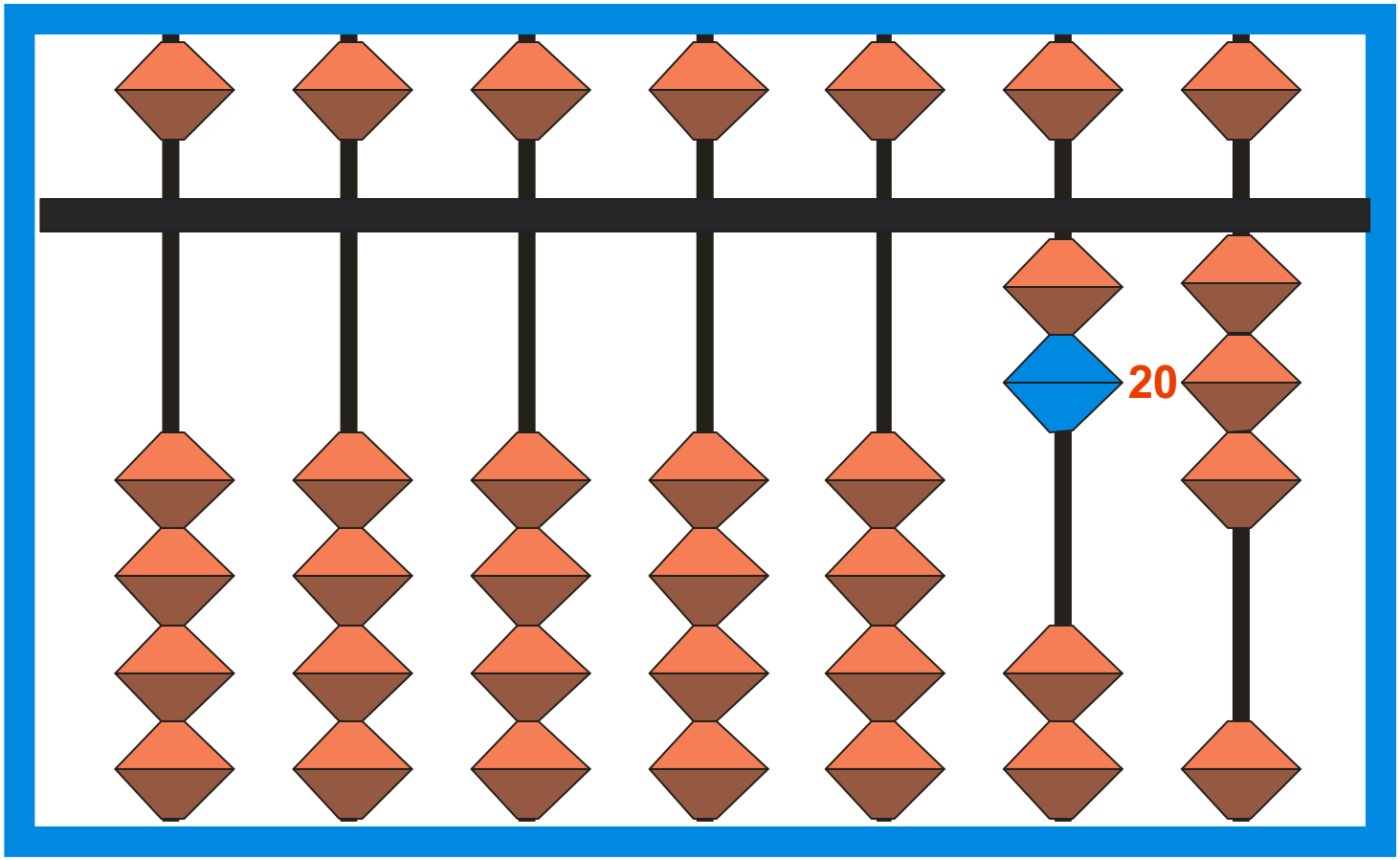
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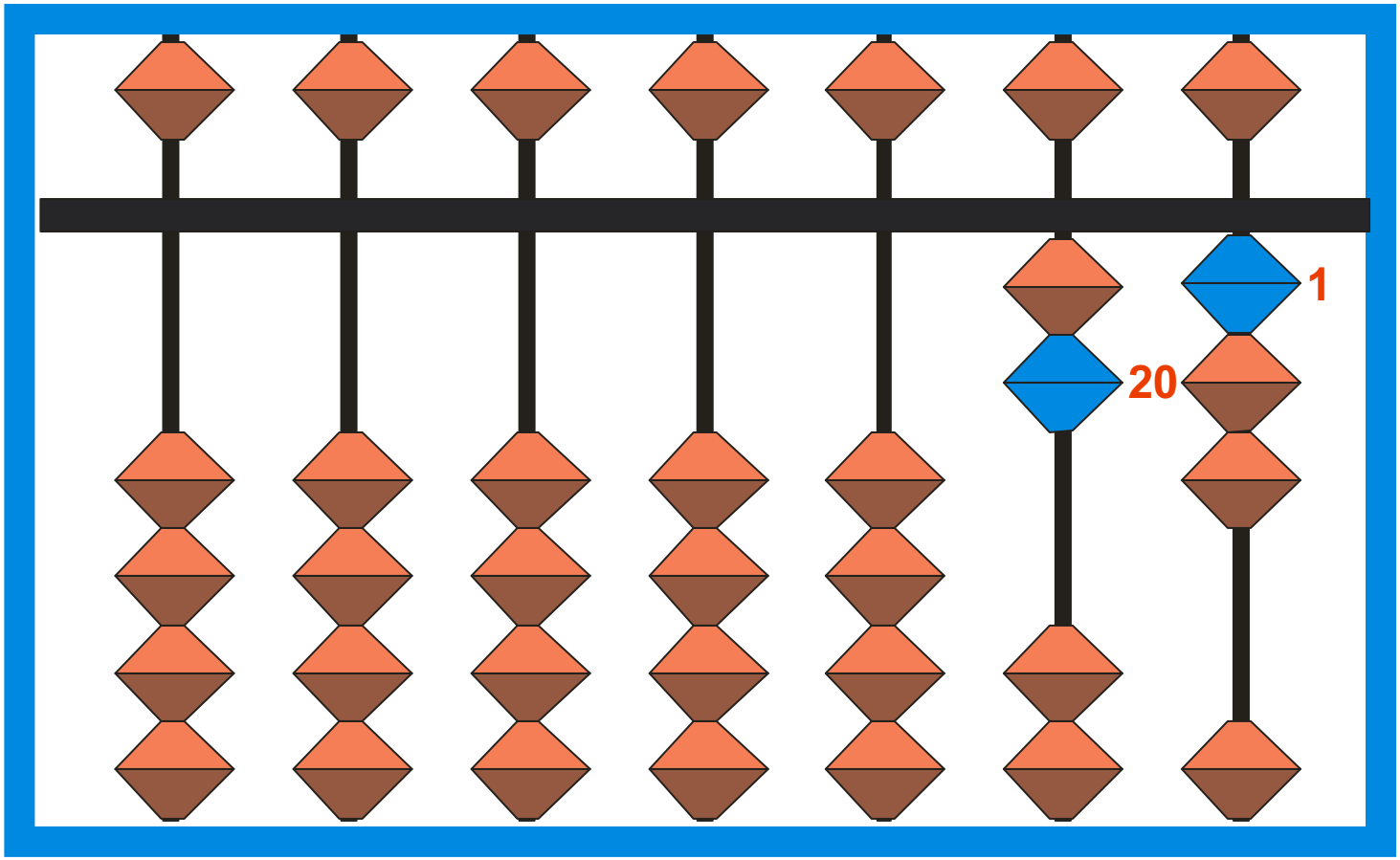
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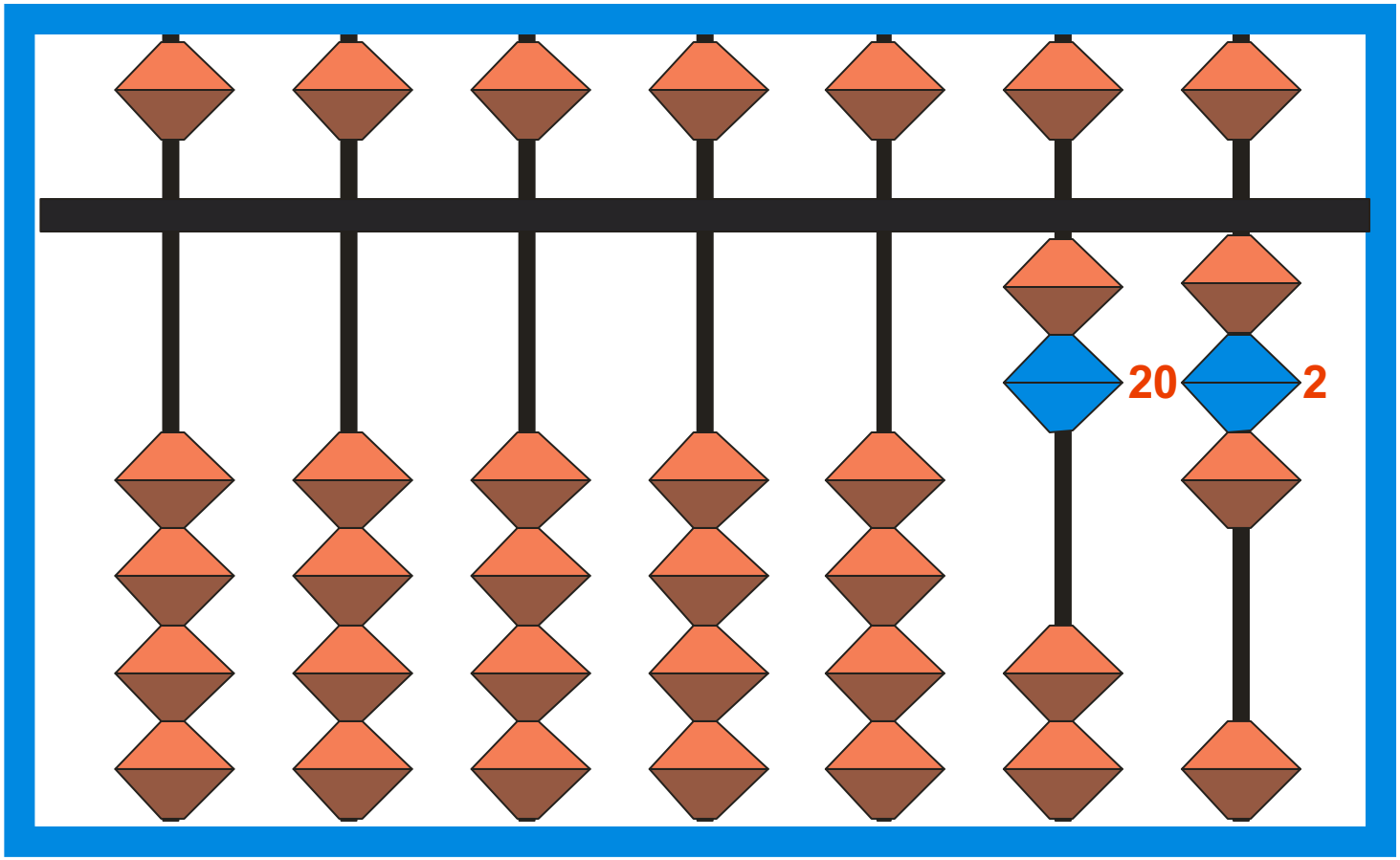
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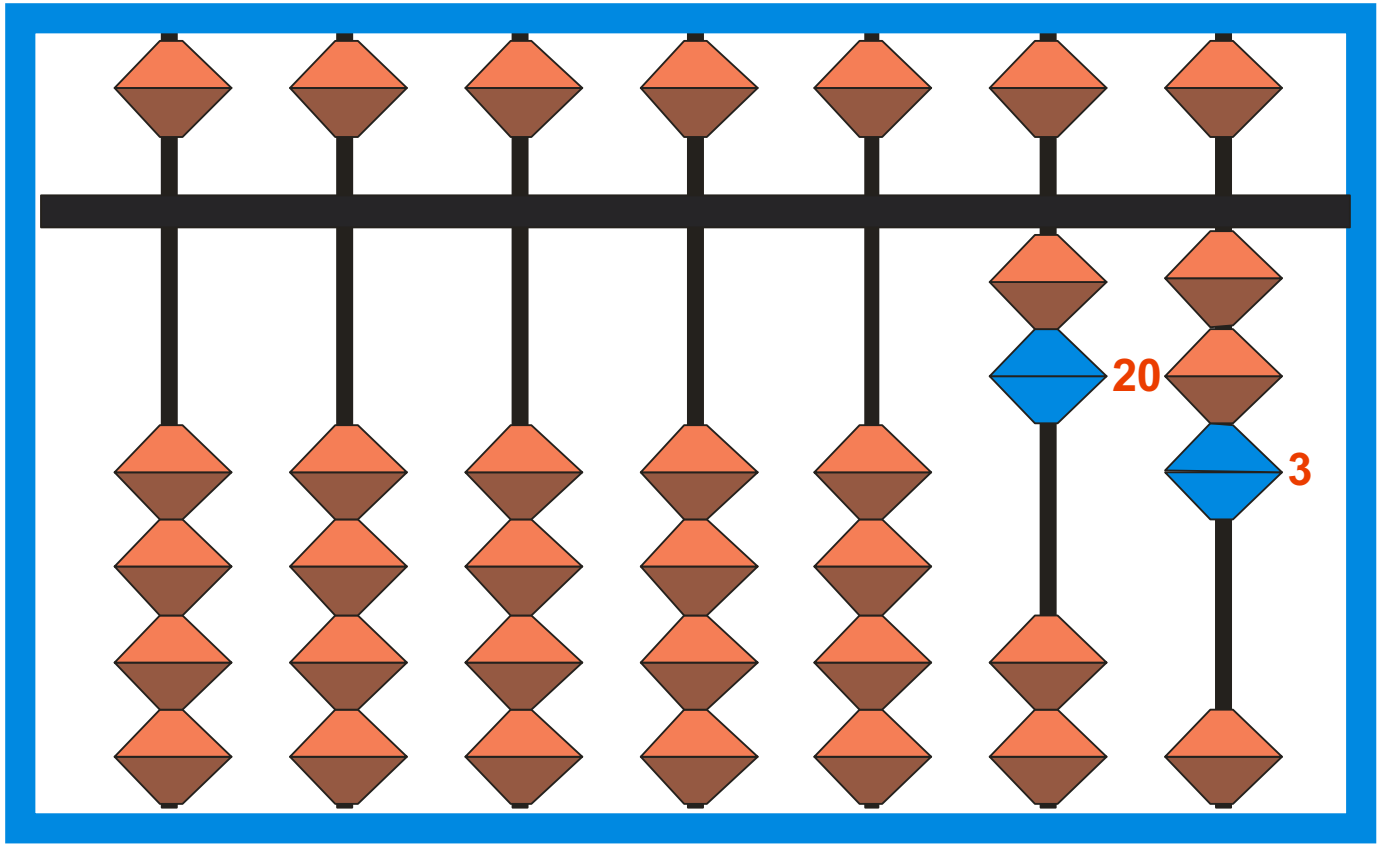

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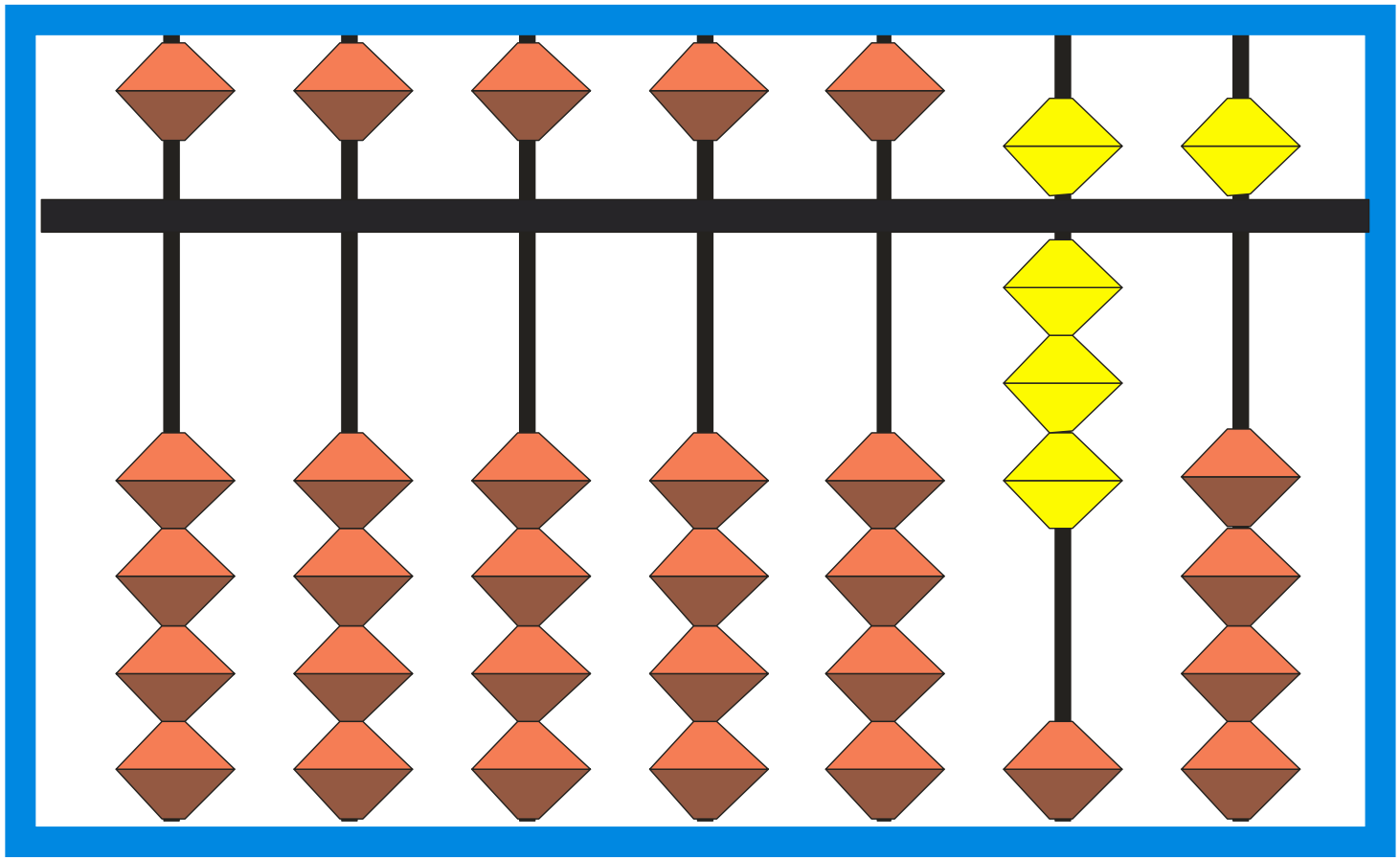

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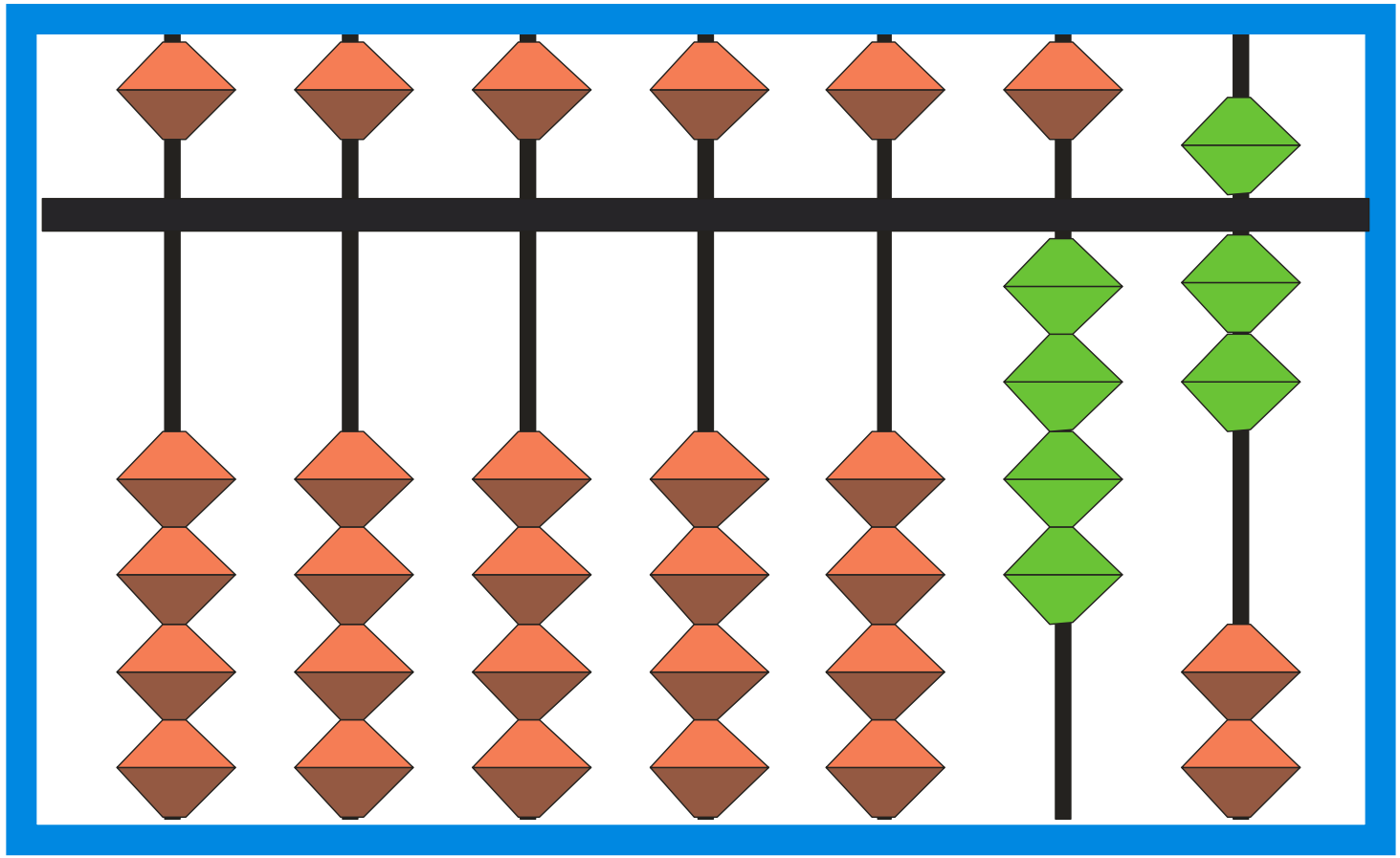

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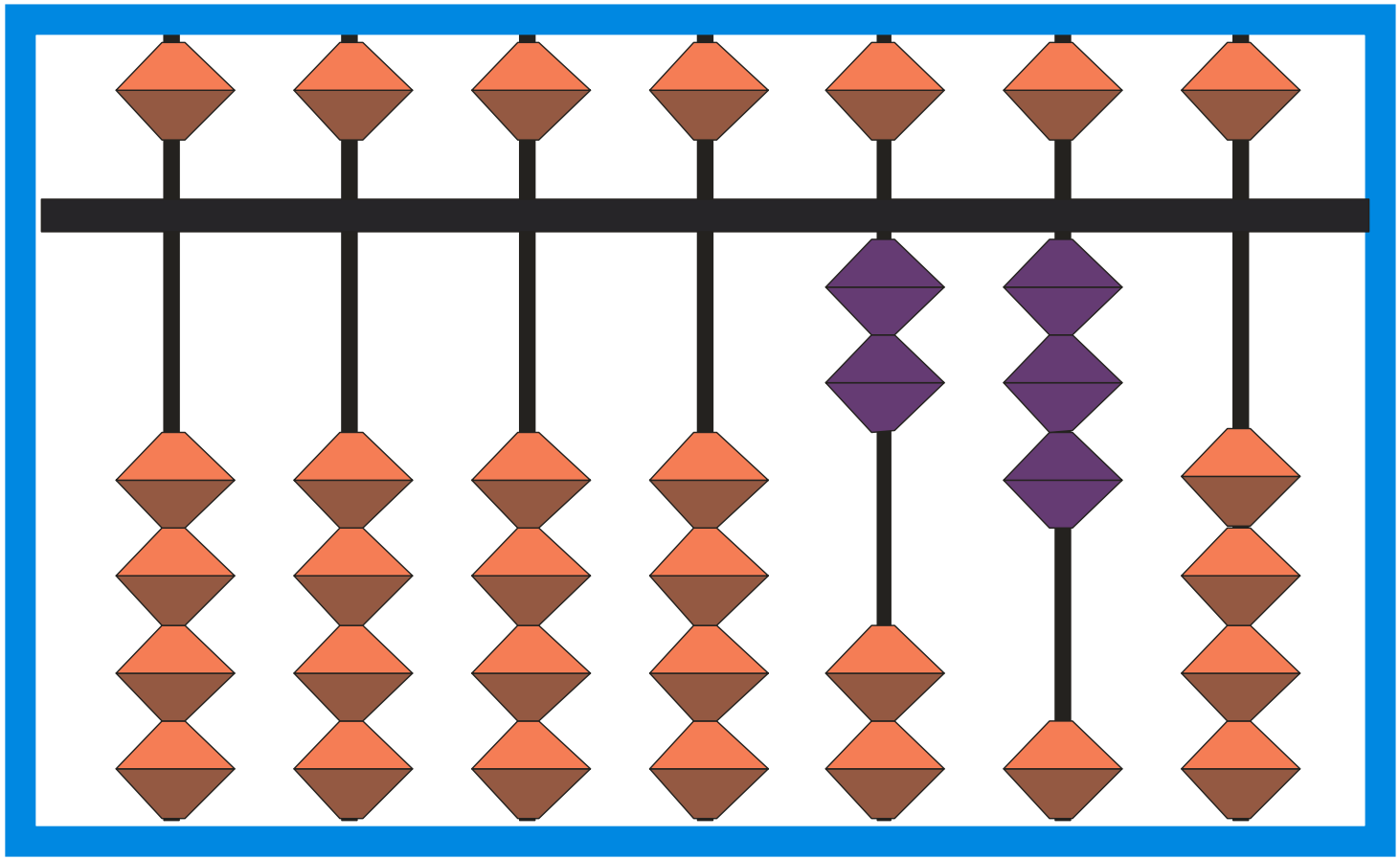
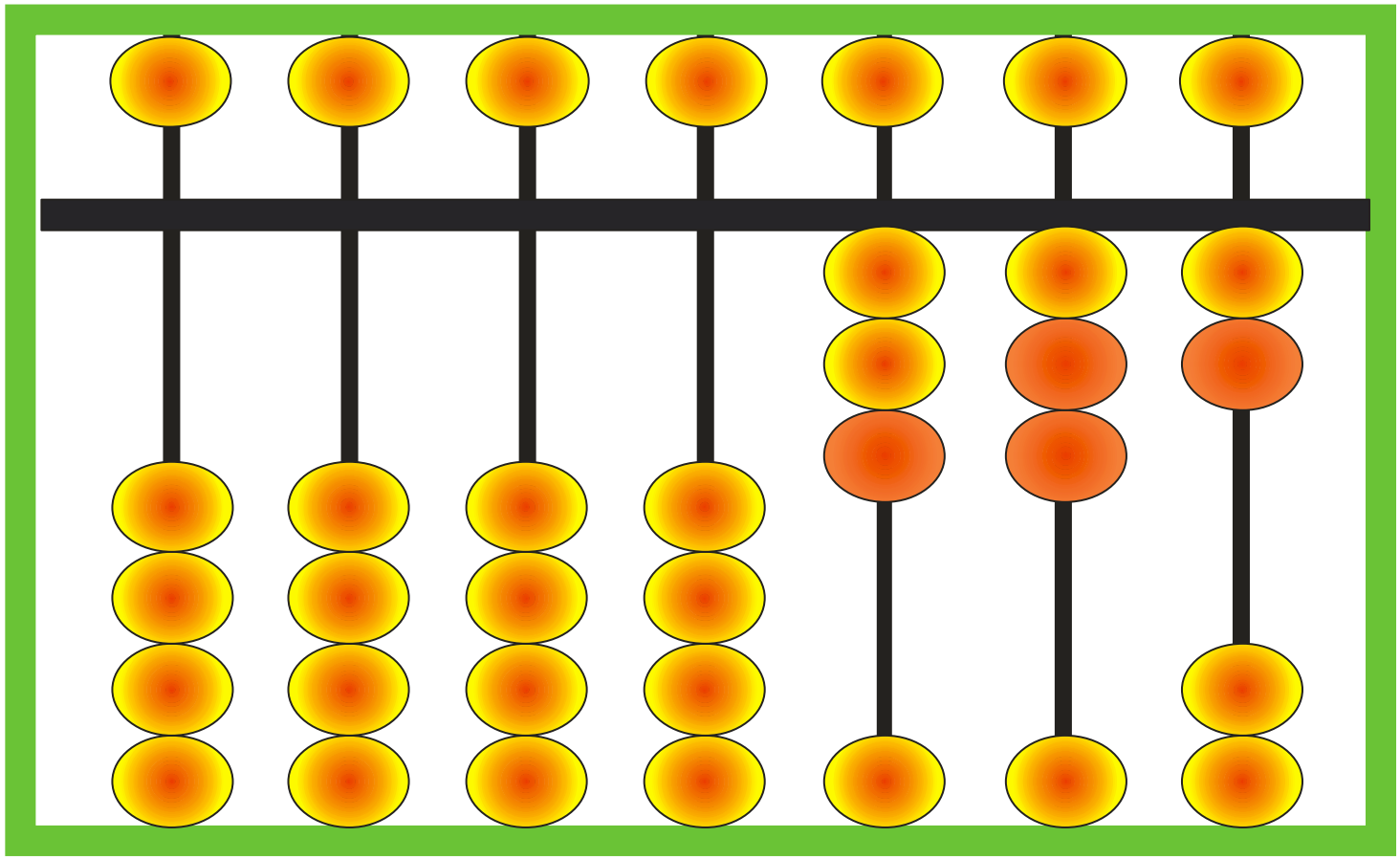


Dodawanie na sorobanie



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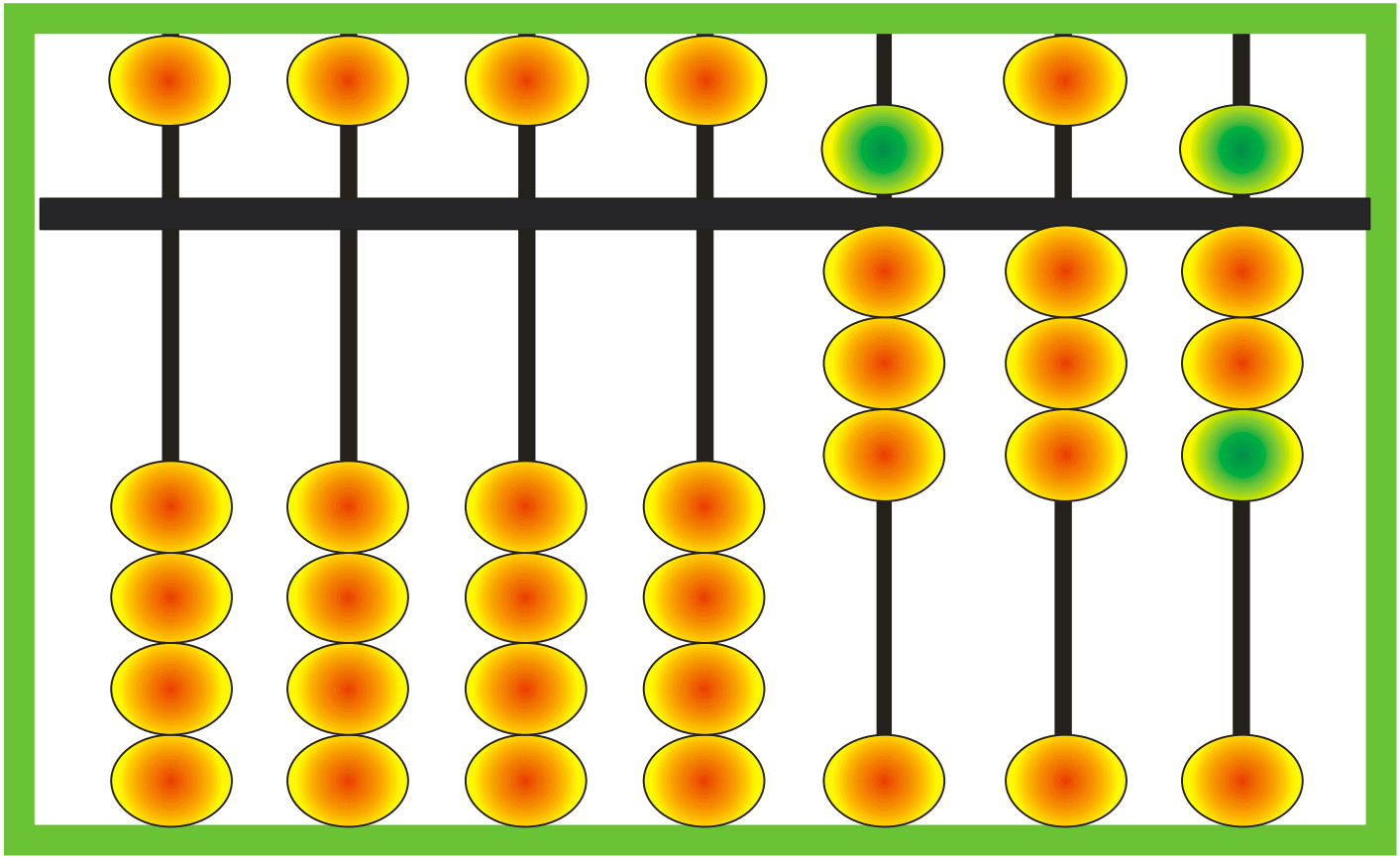

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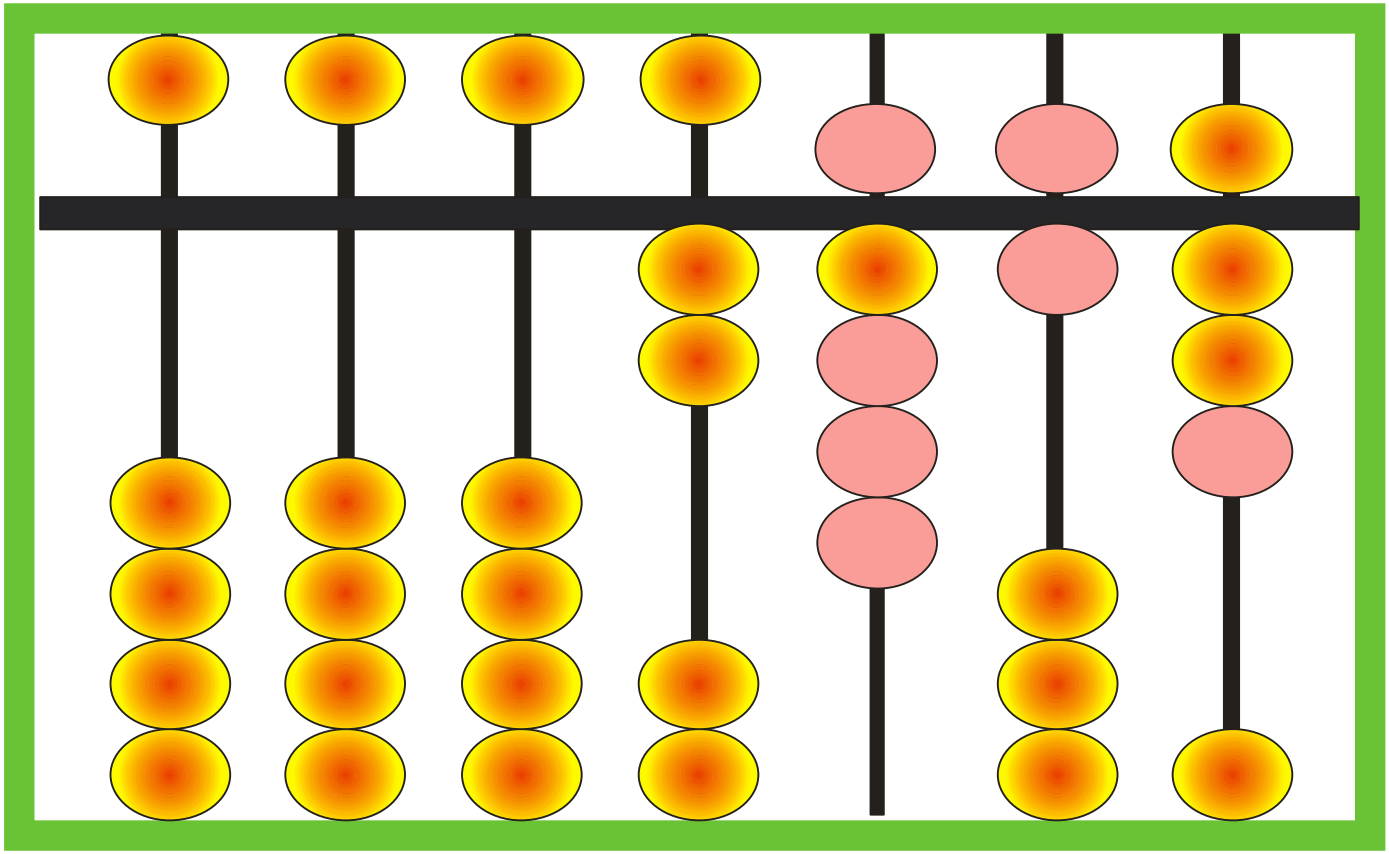

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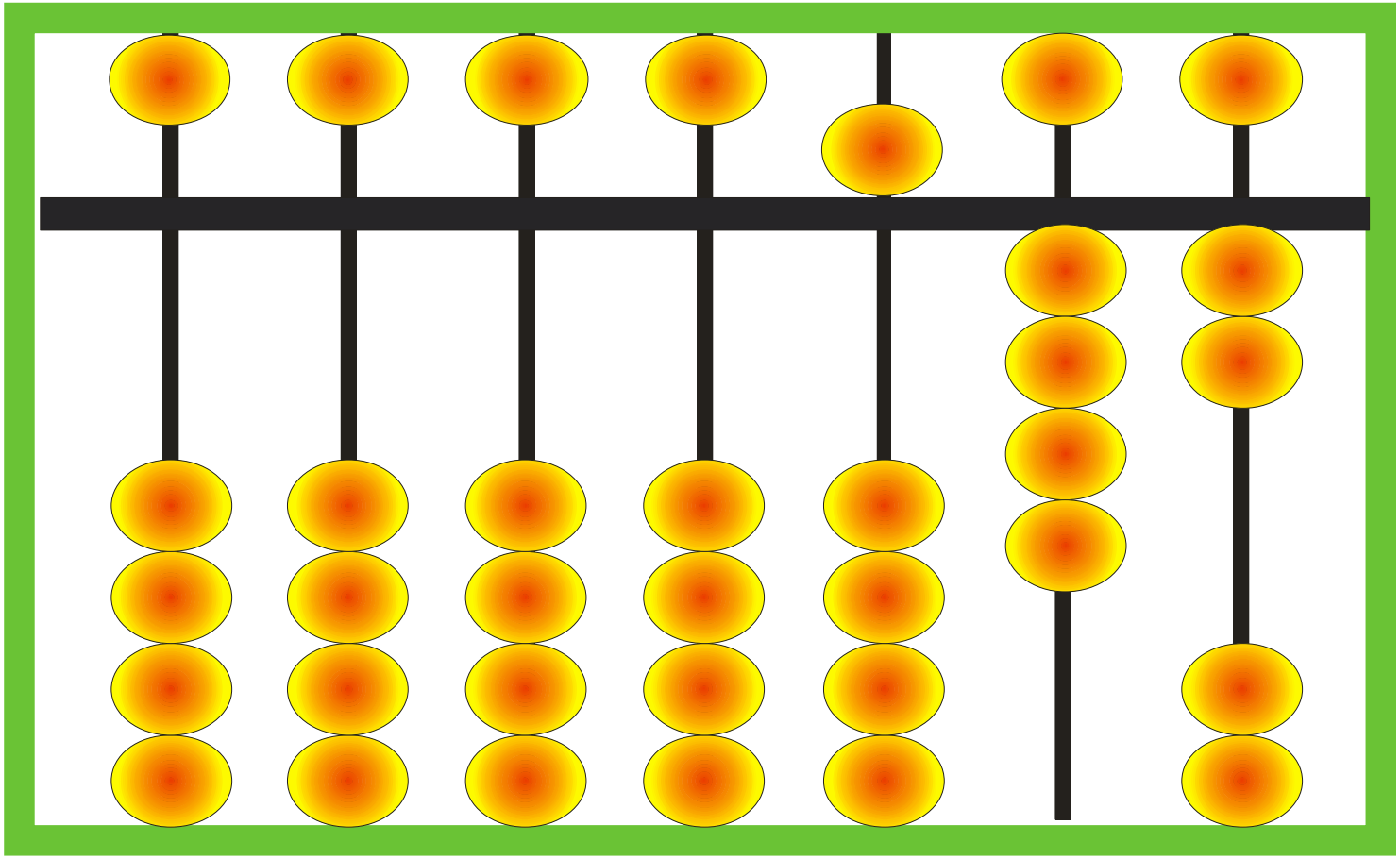

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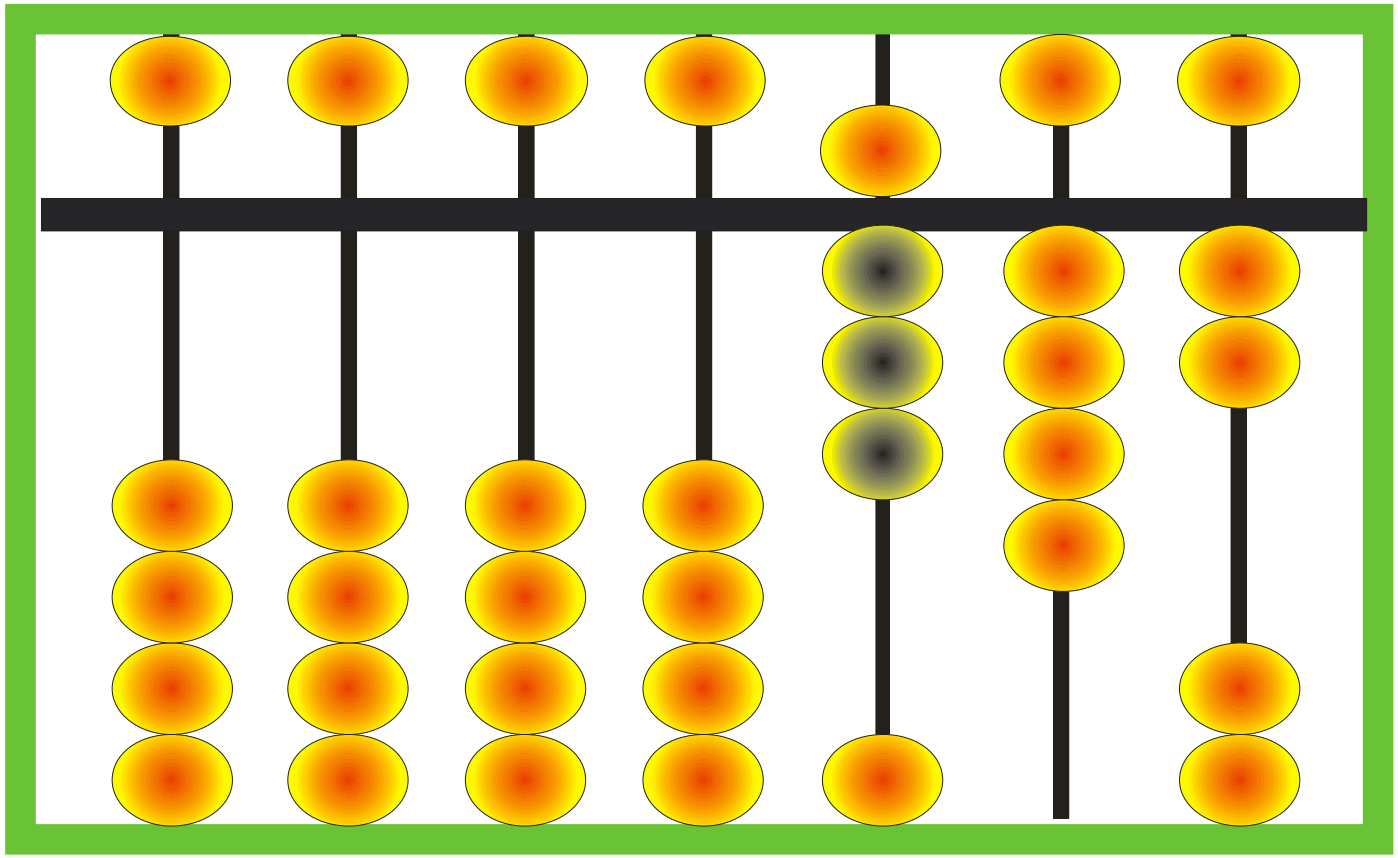

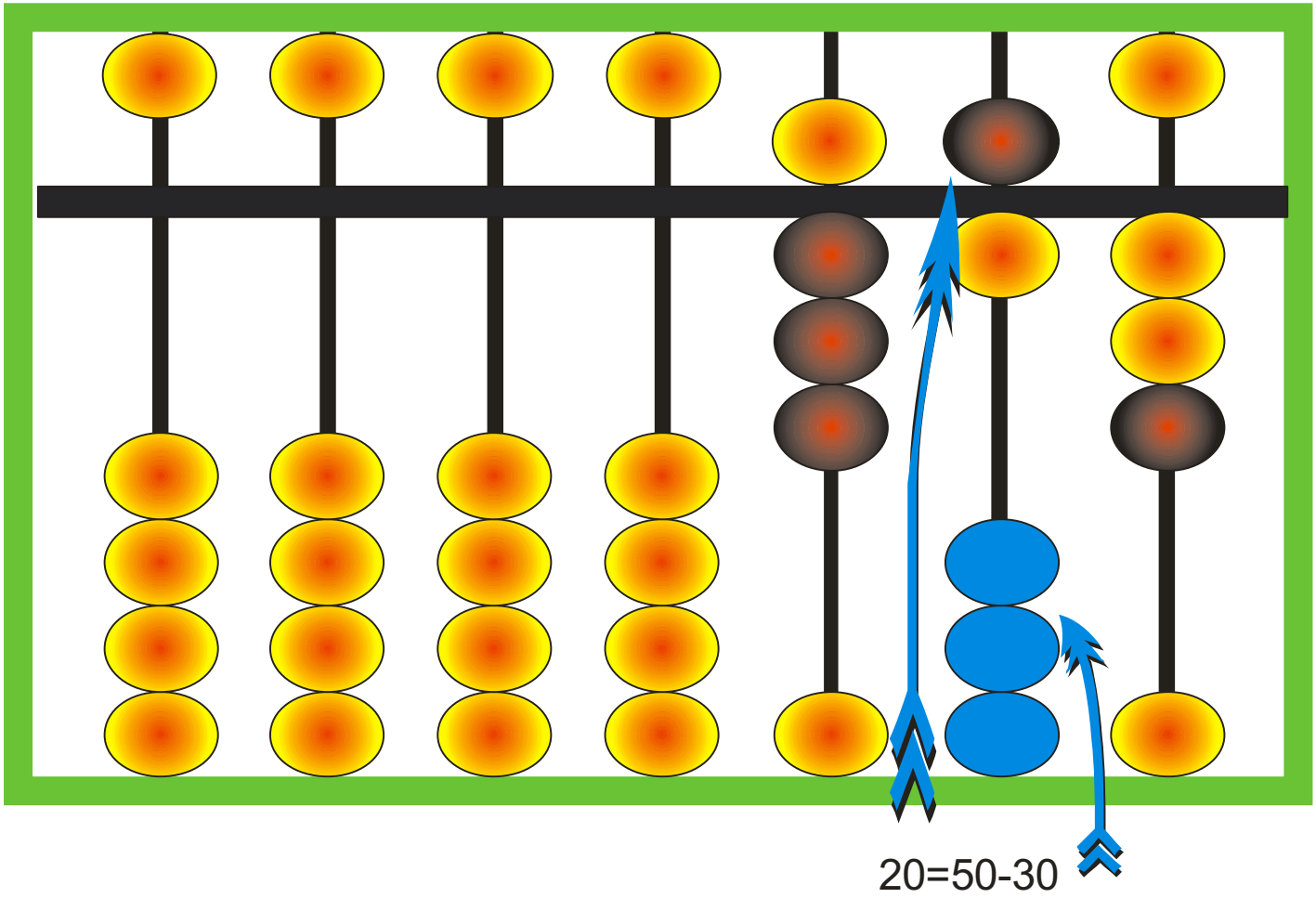
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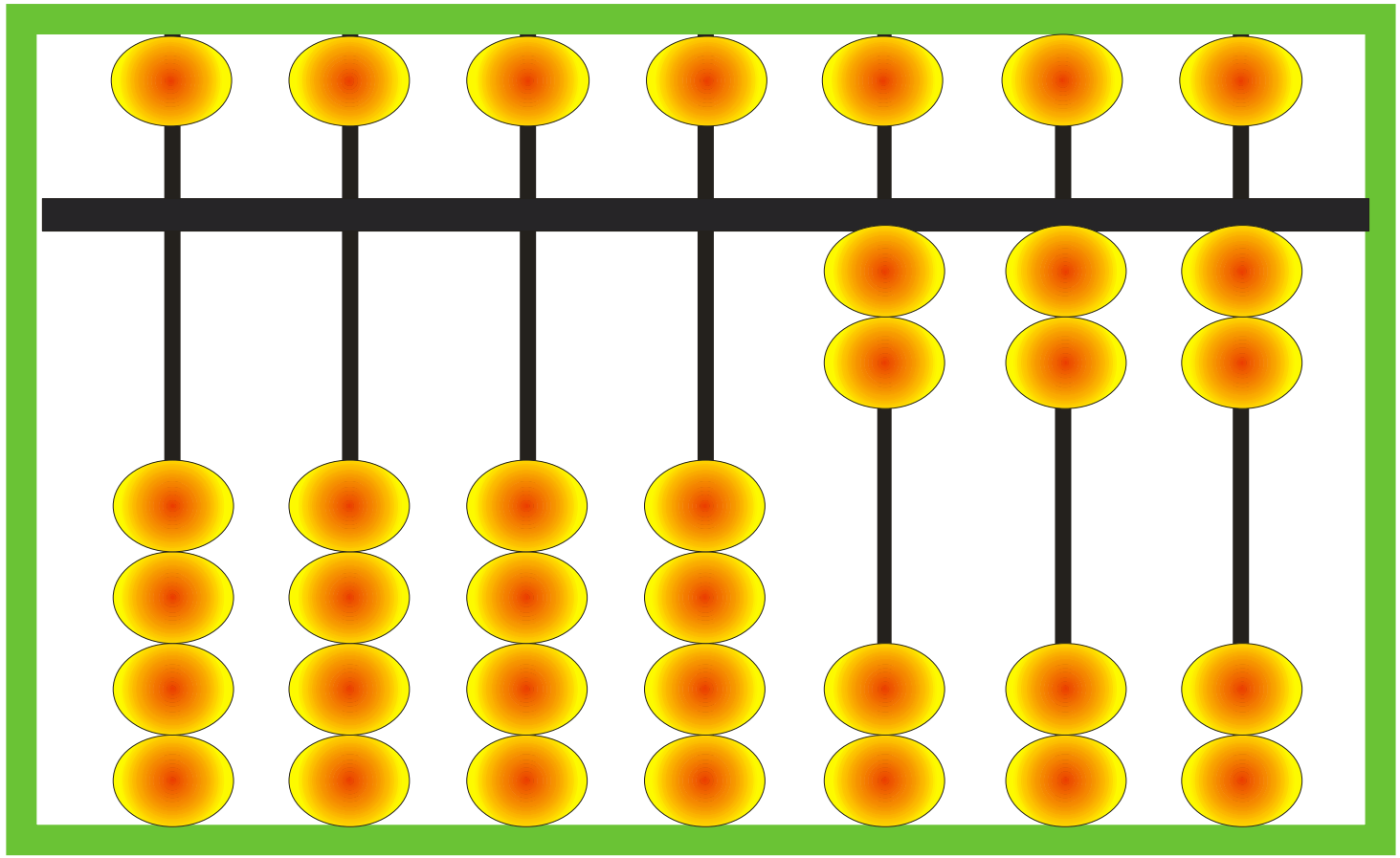

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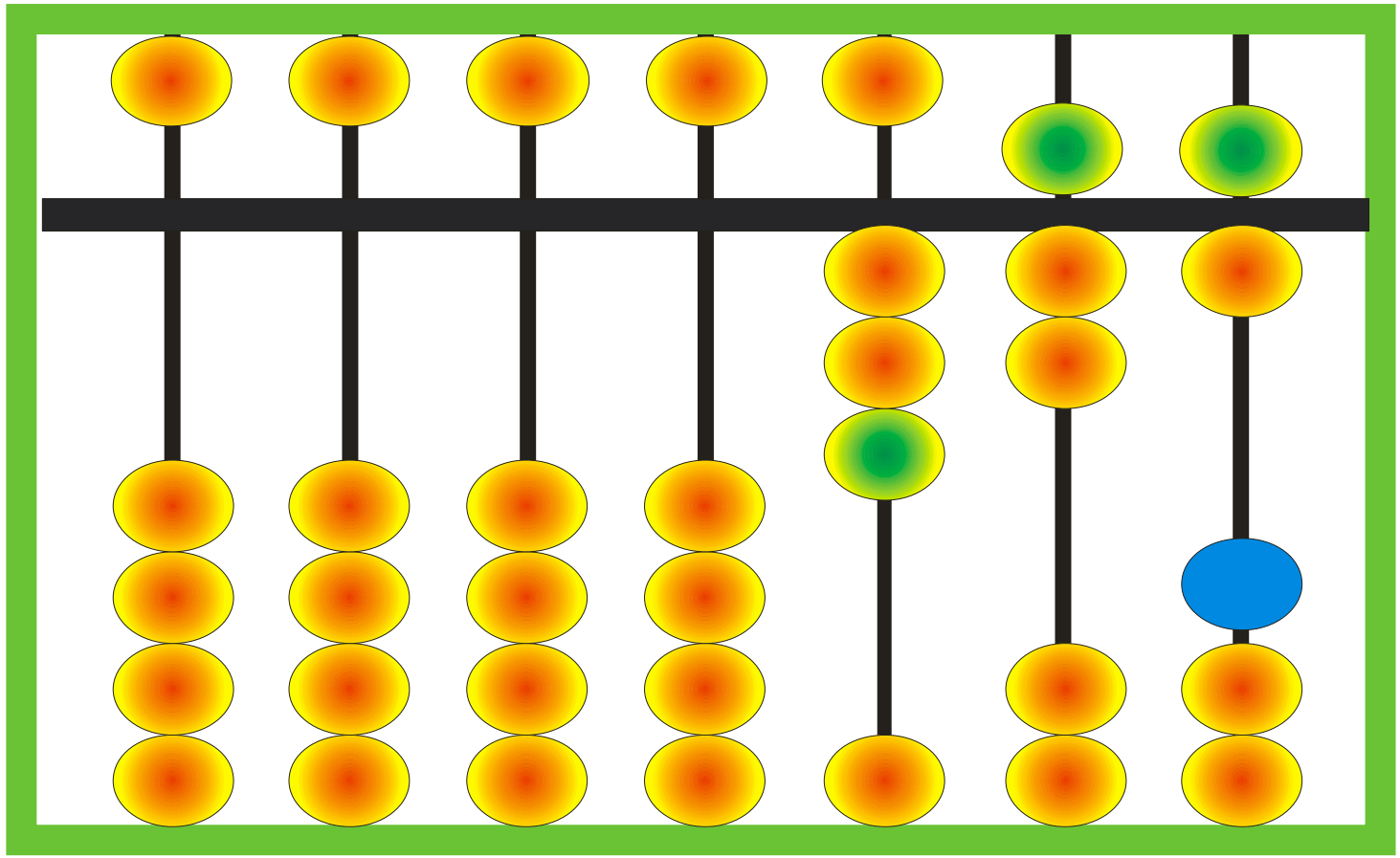
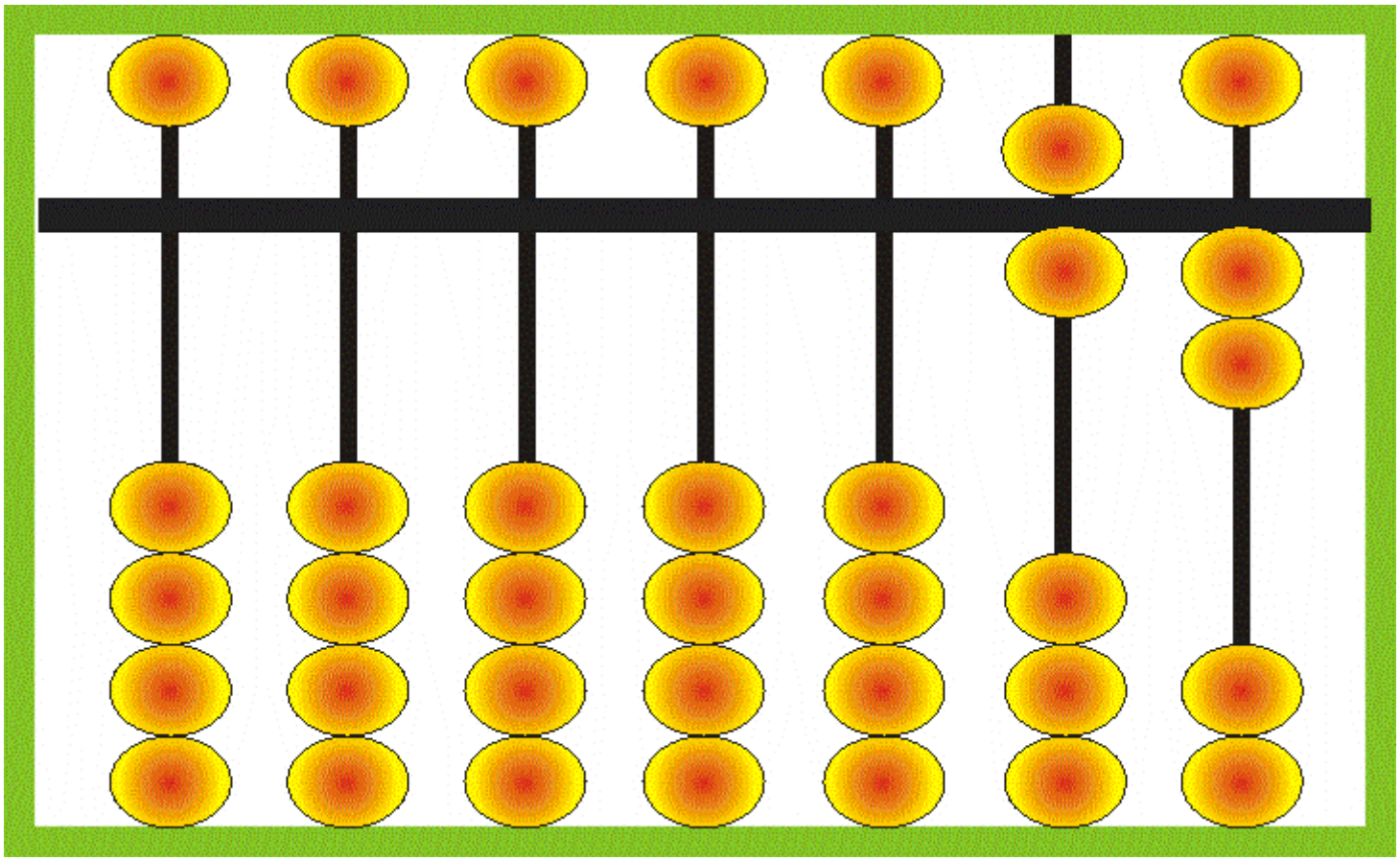
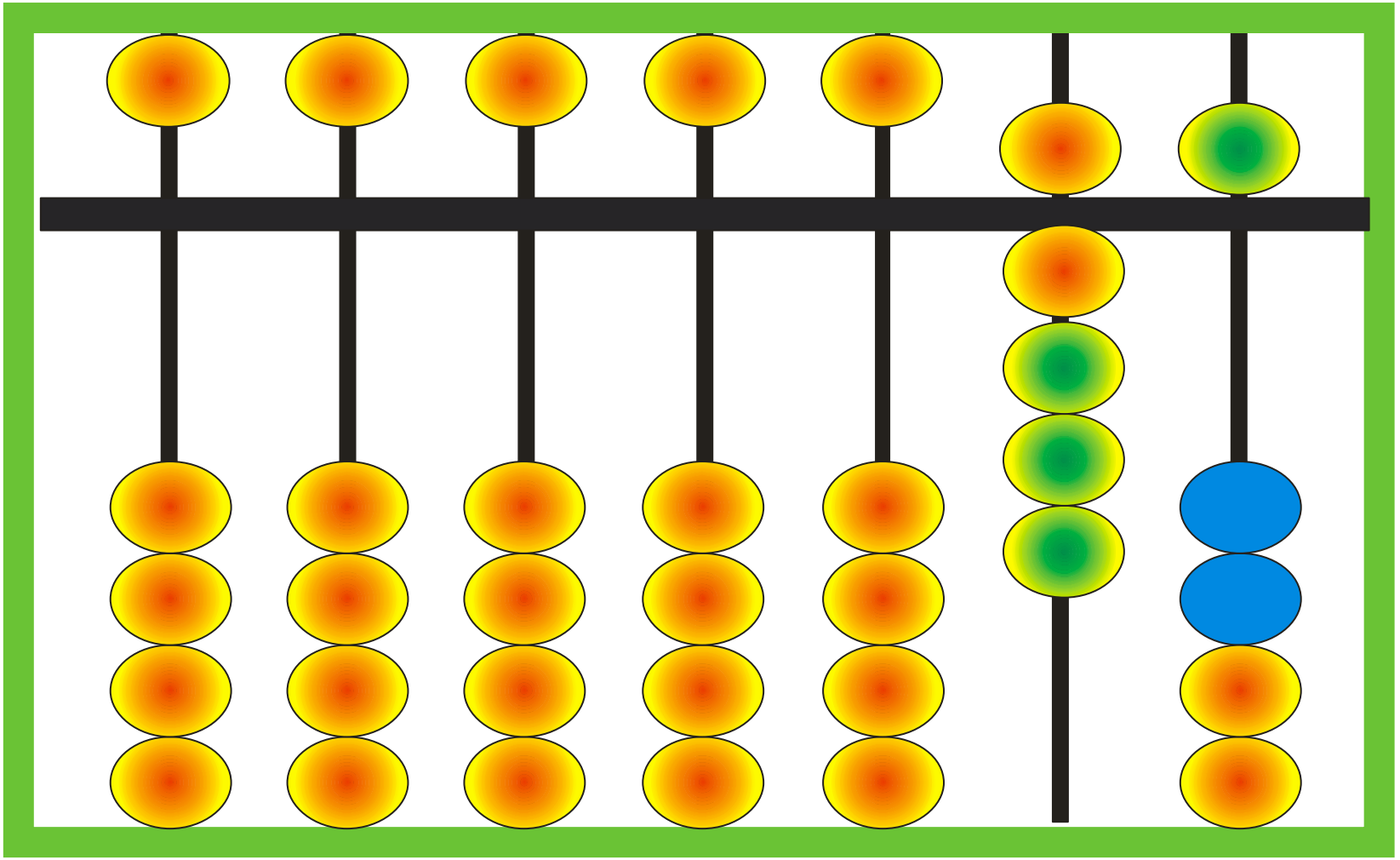


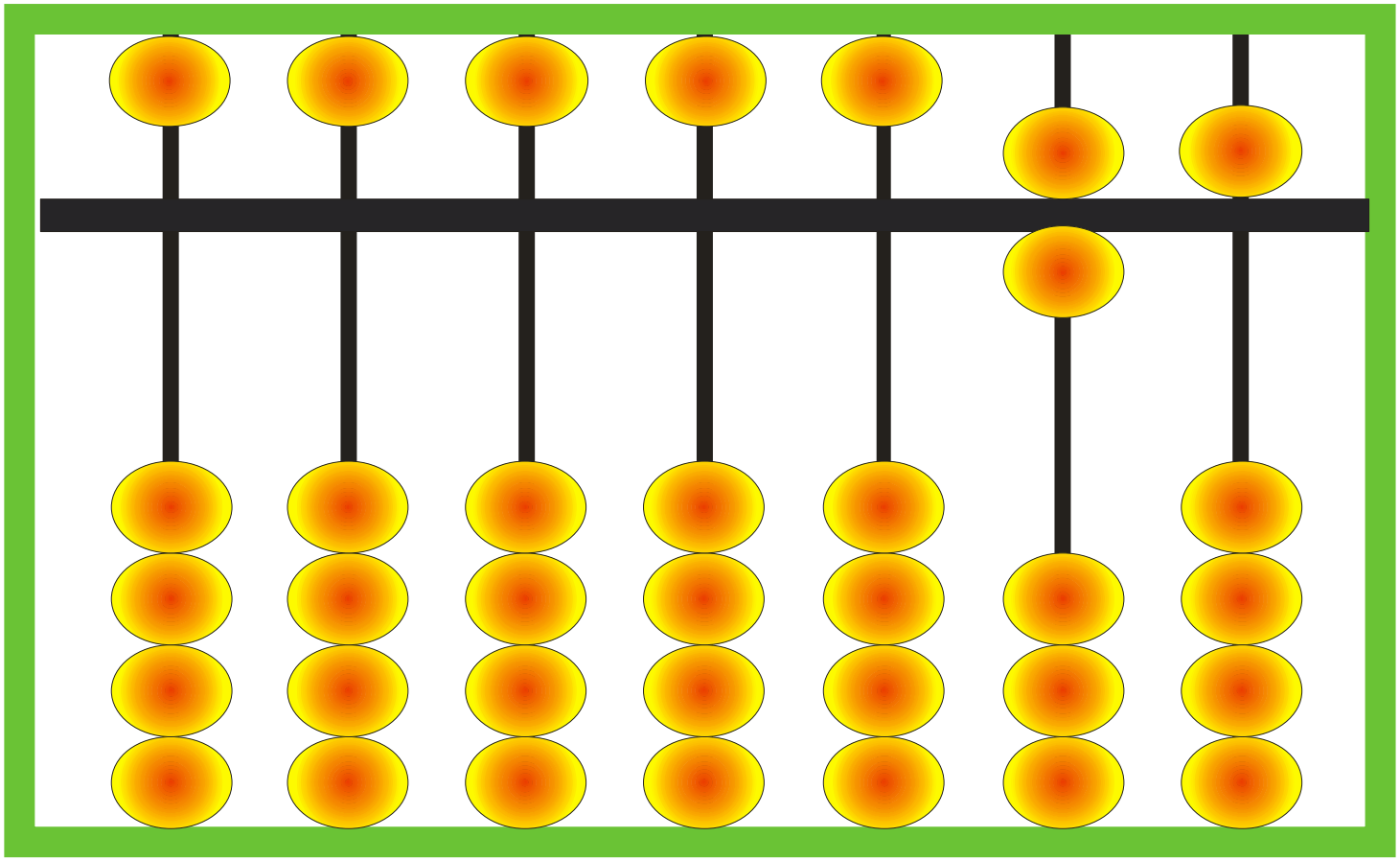
A teraz spróbuj samodzielnie:



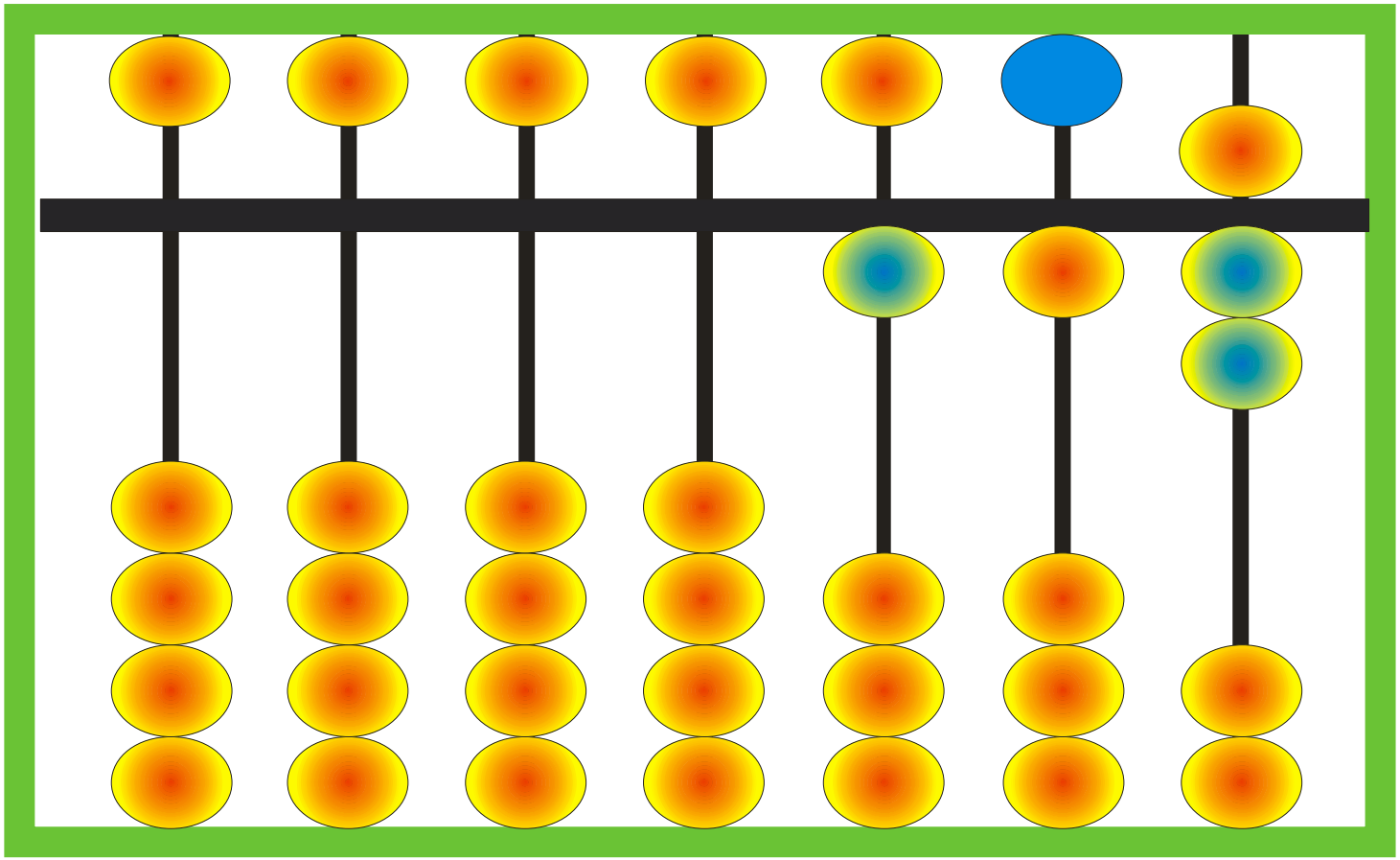
+33



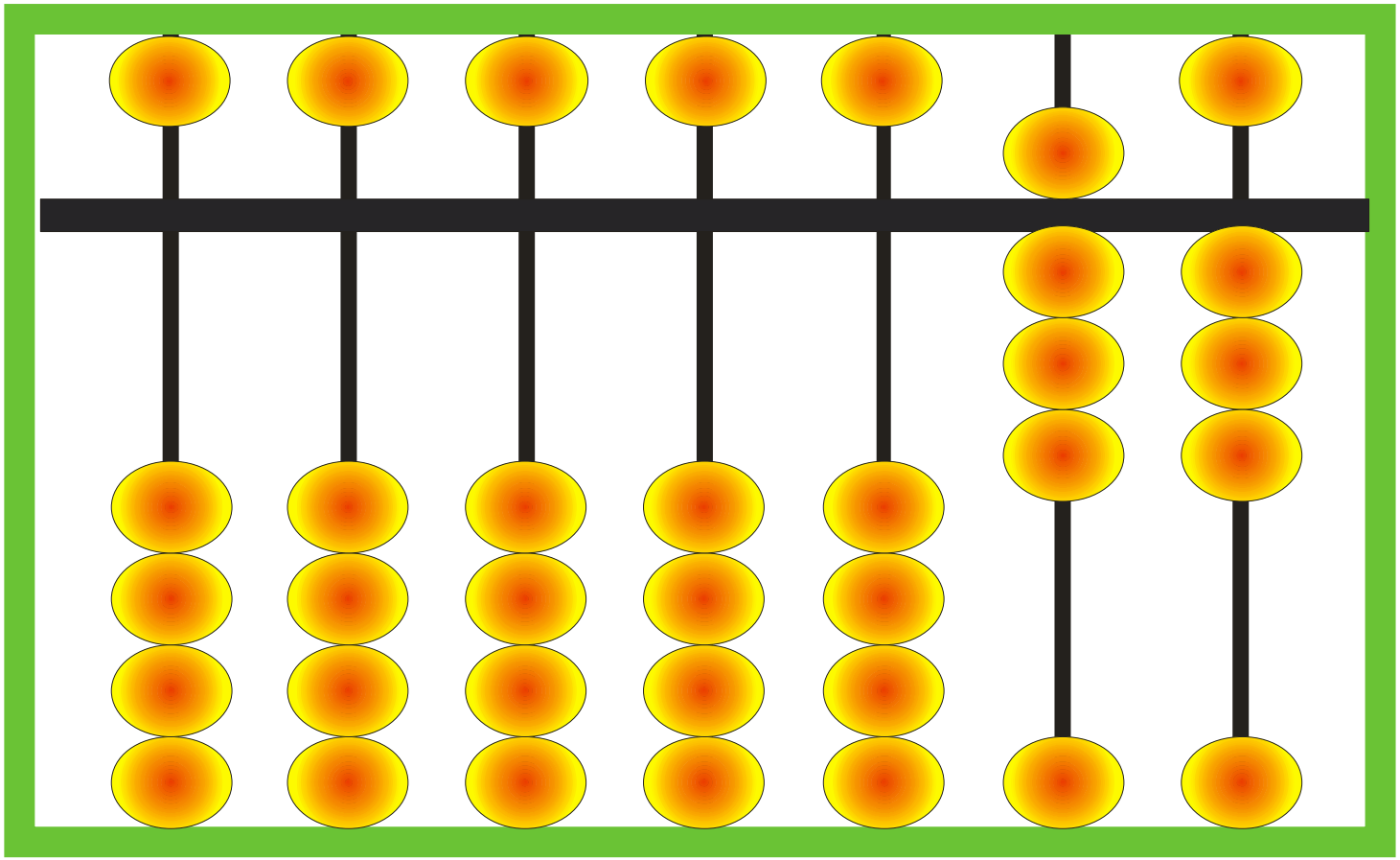
65



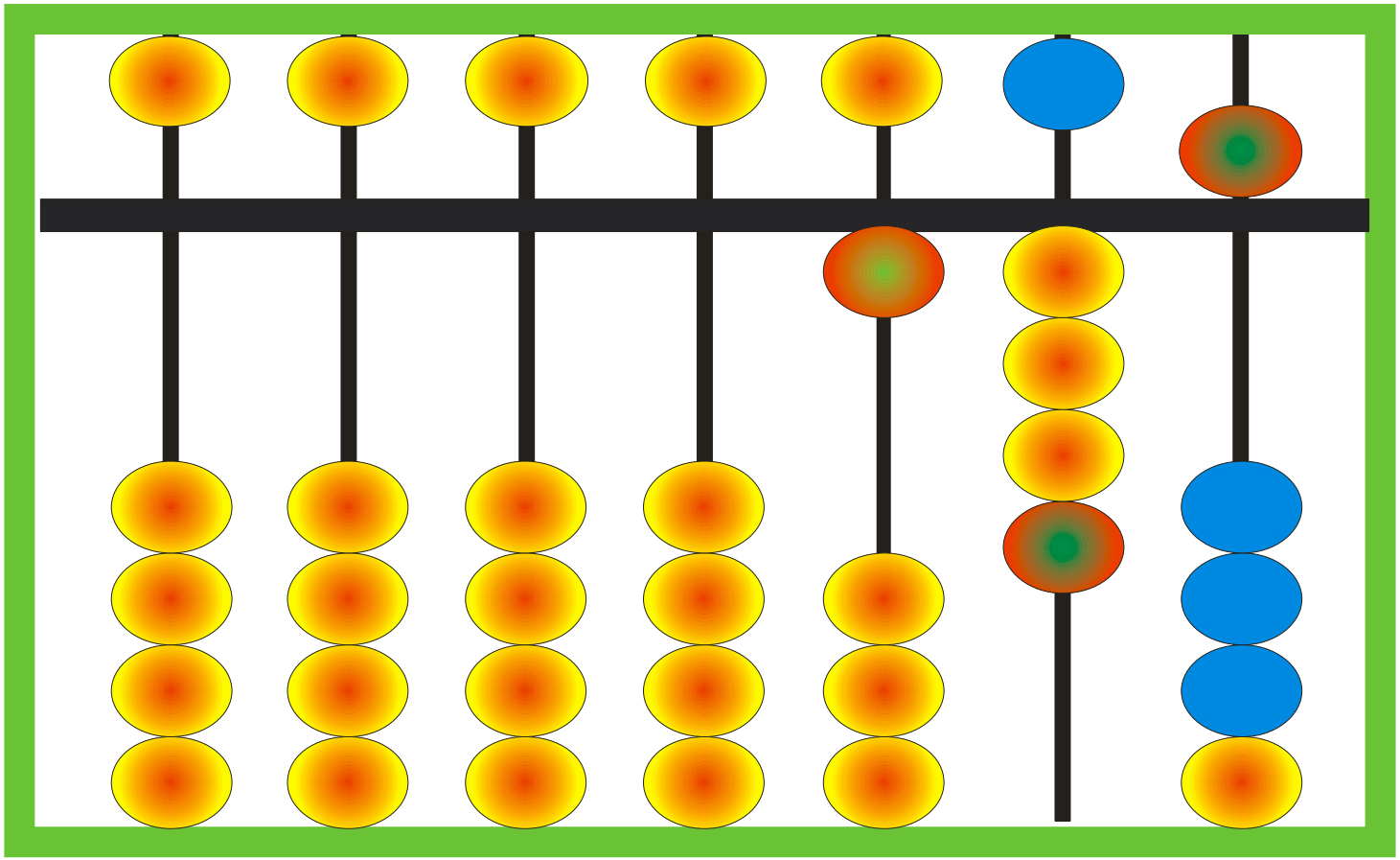
+52 (5=10-5)



83



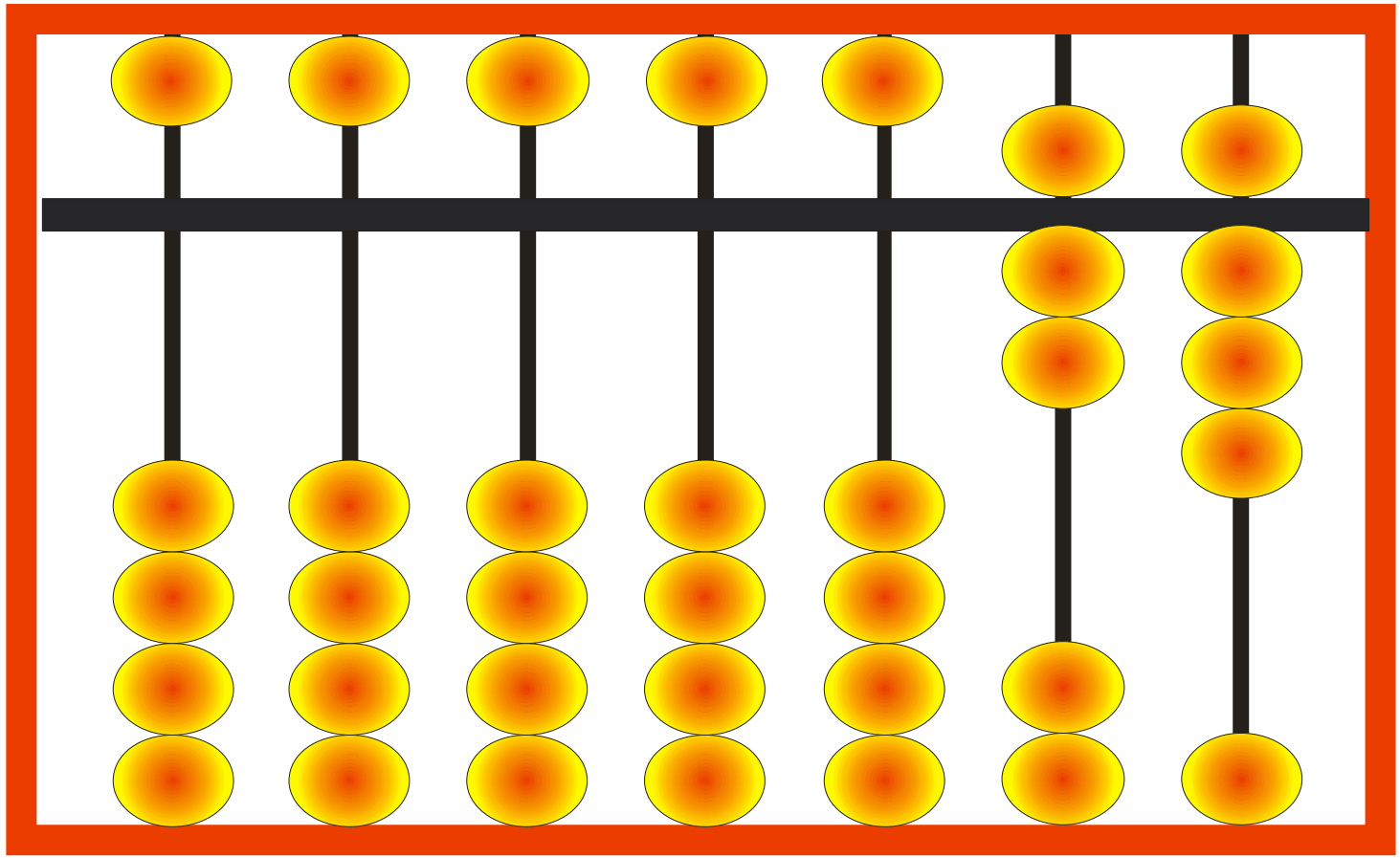
+62



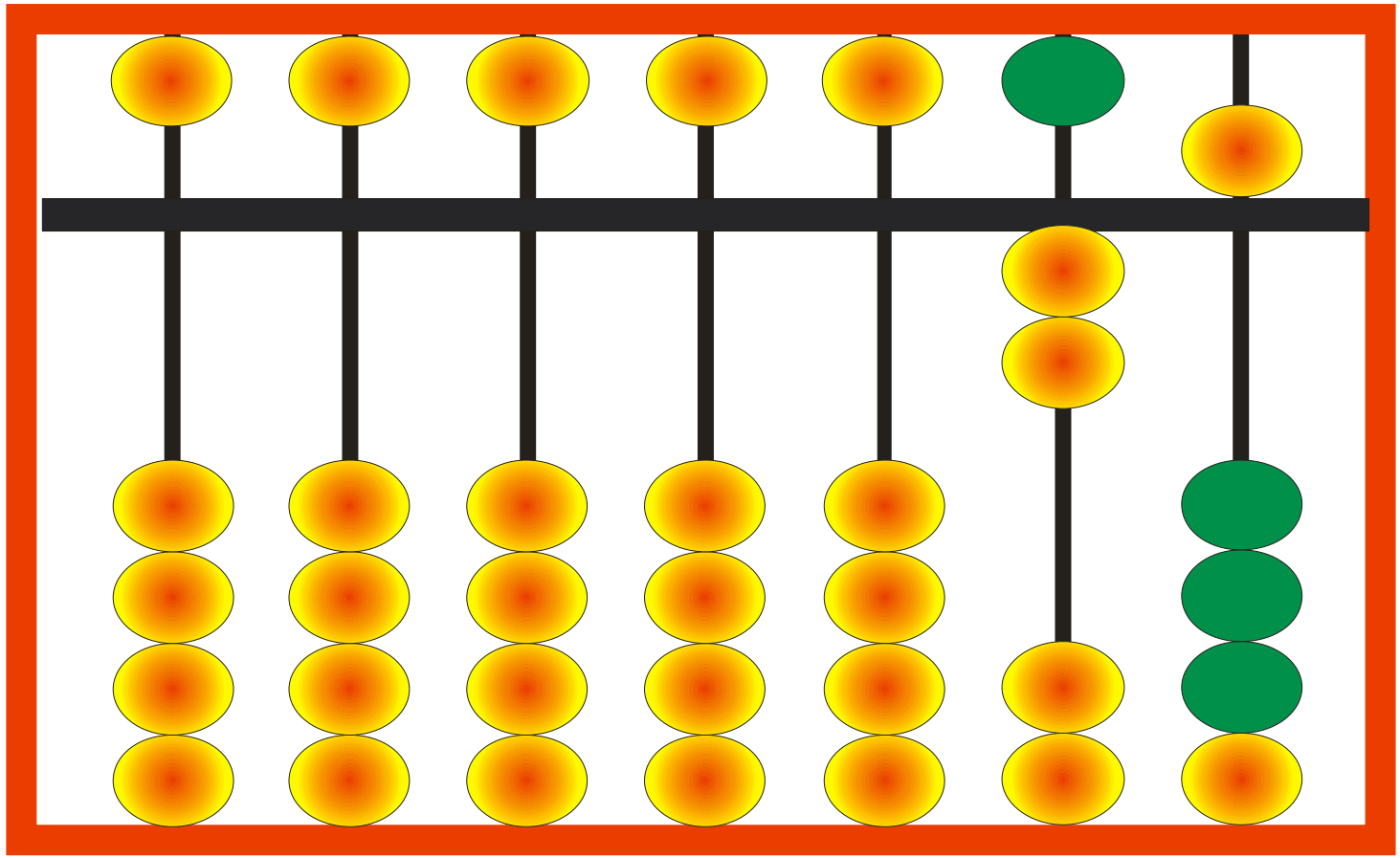
60=100-40 to znaczy zabieramy 50 i dokładamy 10;

Odejmowanie na sorobanie

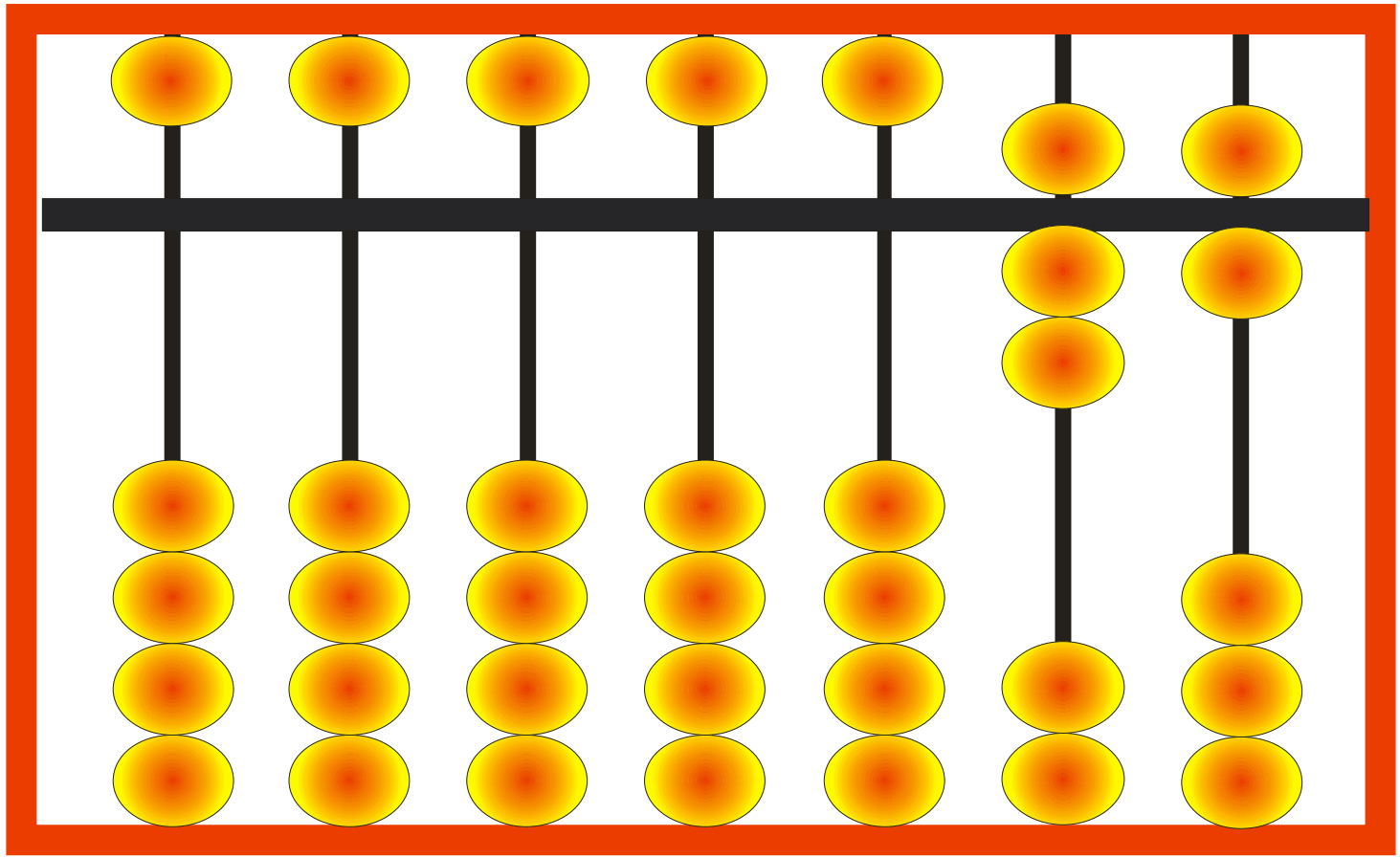
78-53



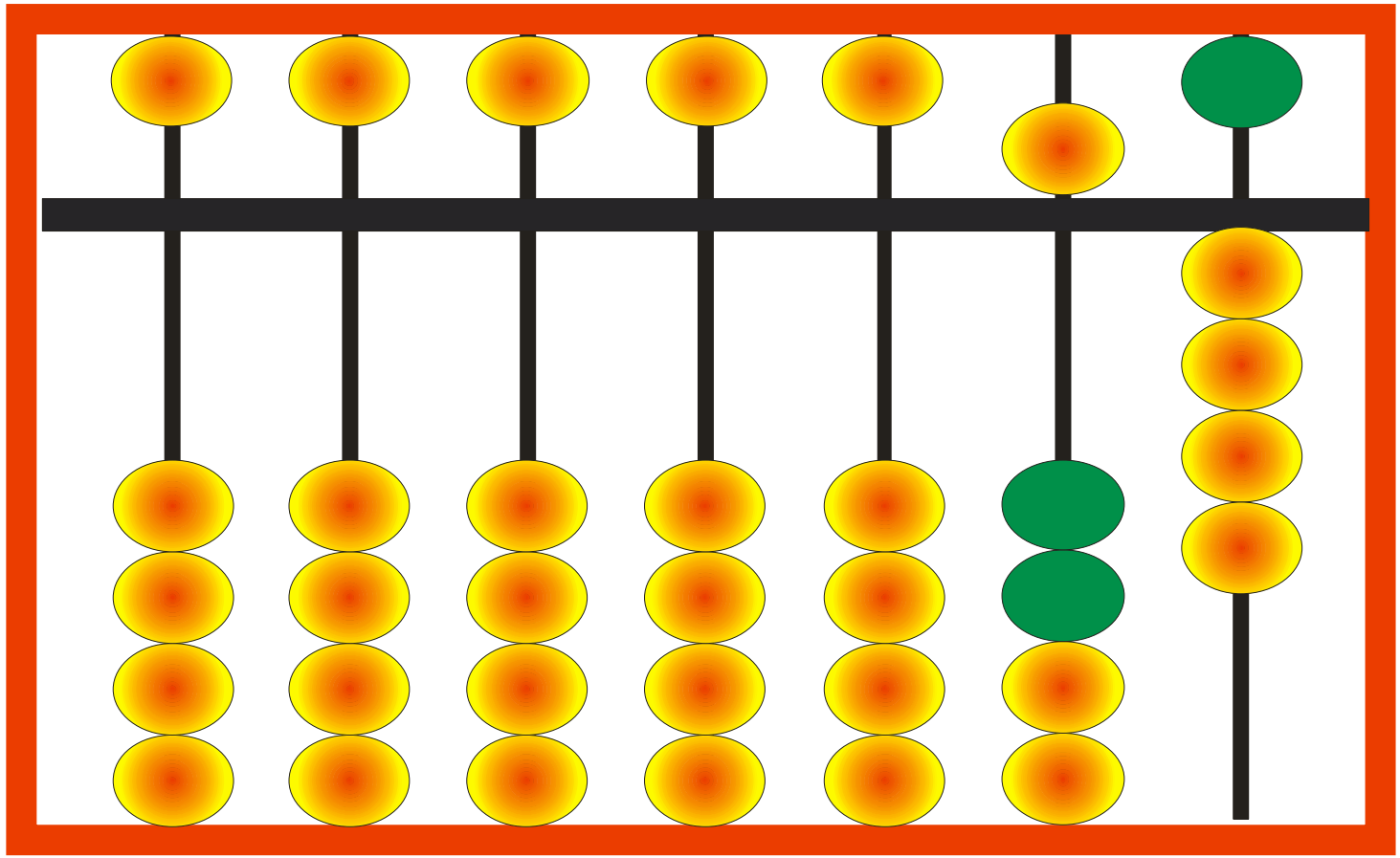
78-53=25



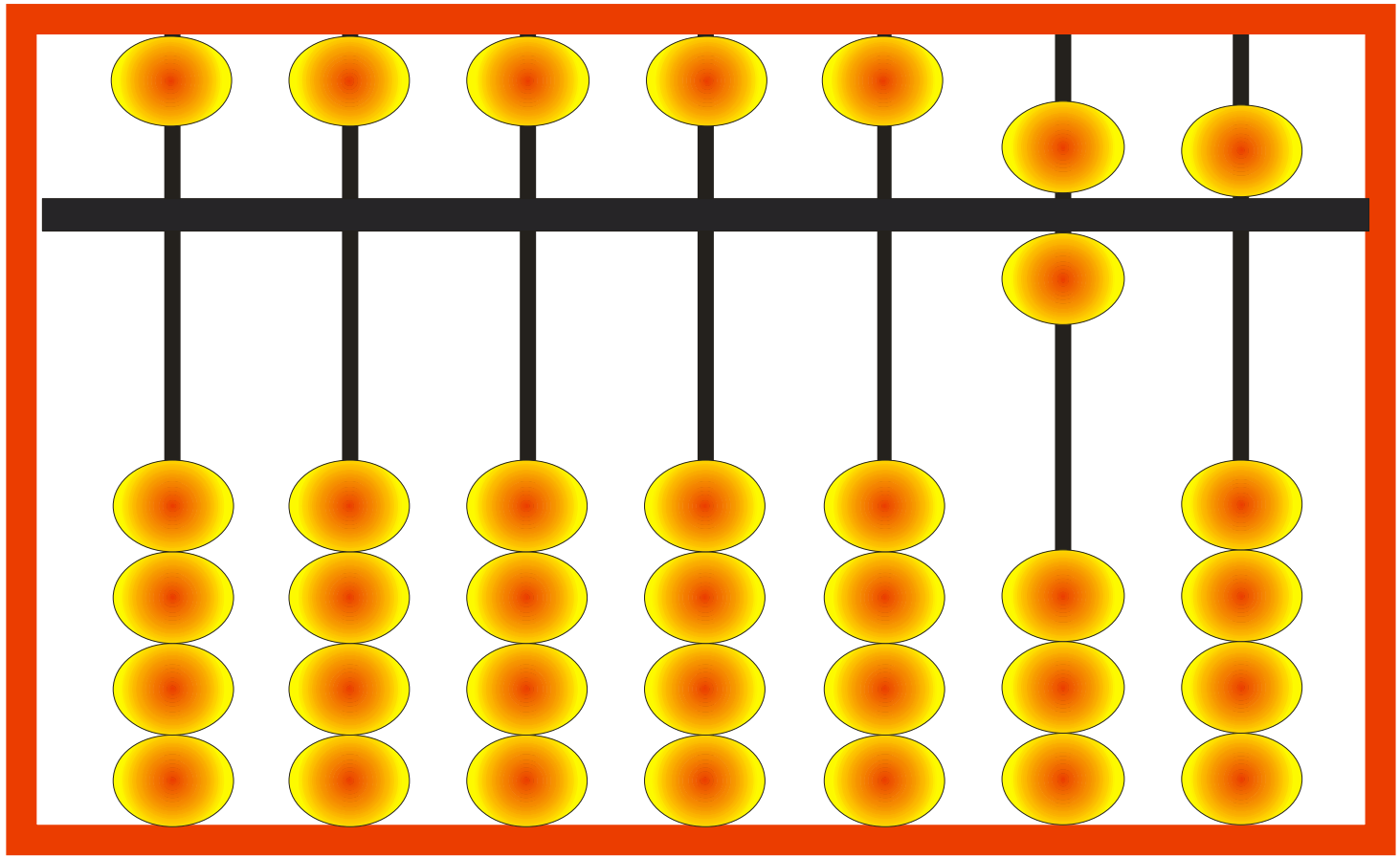
76-22



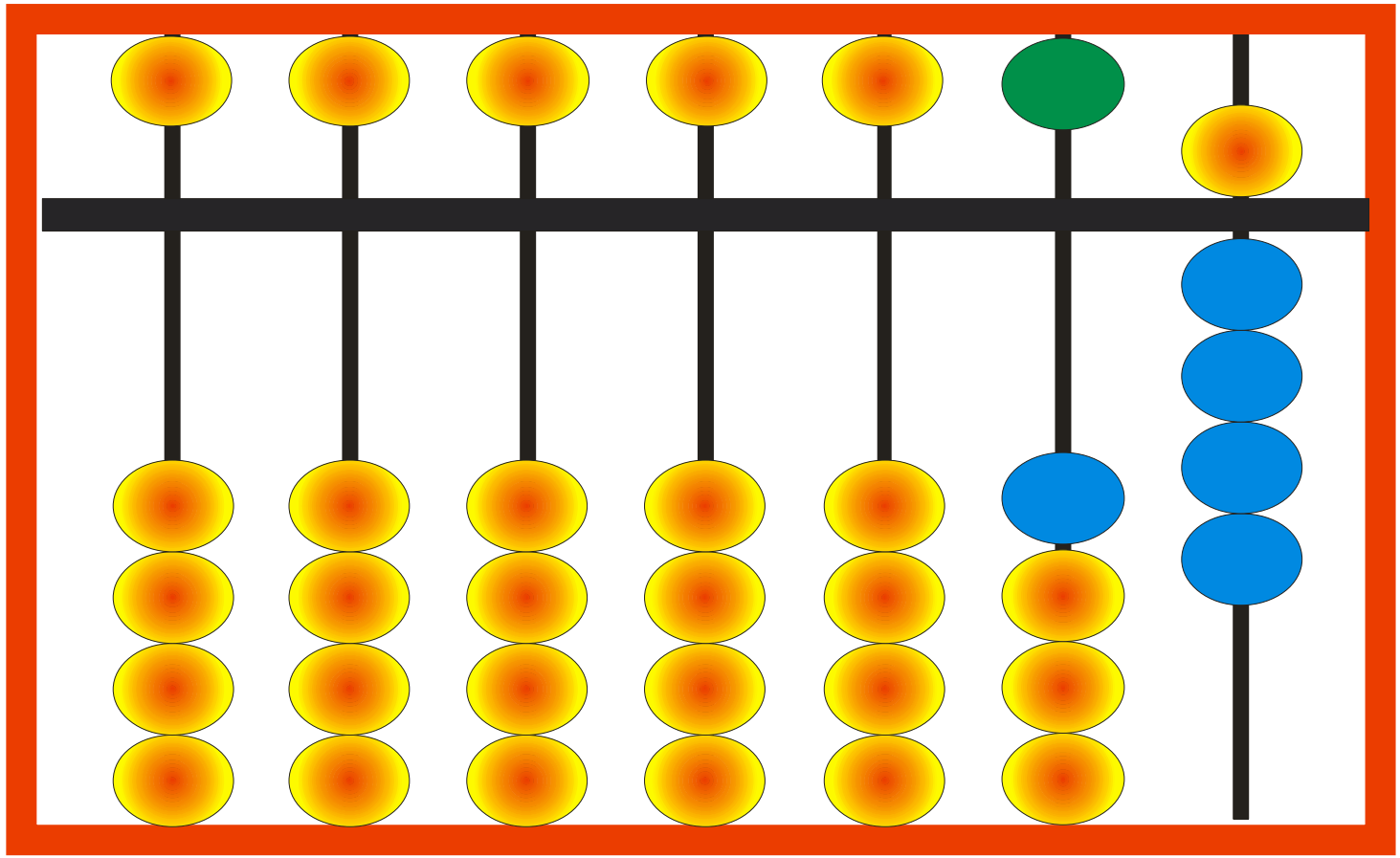
76-22=54



65-56

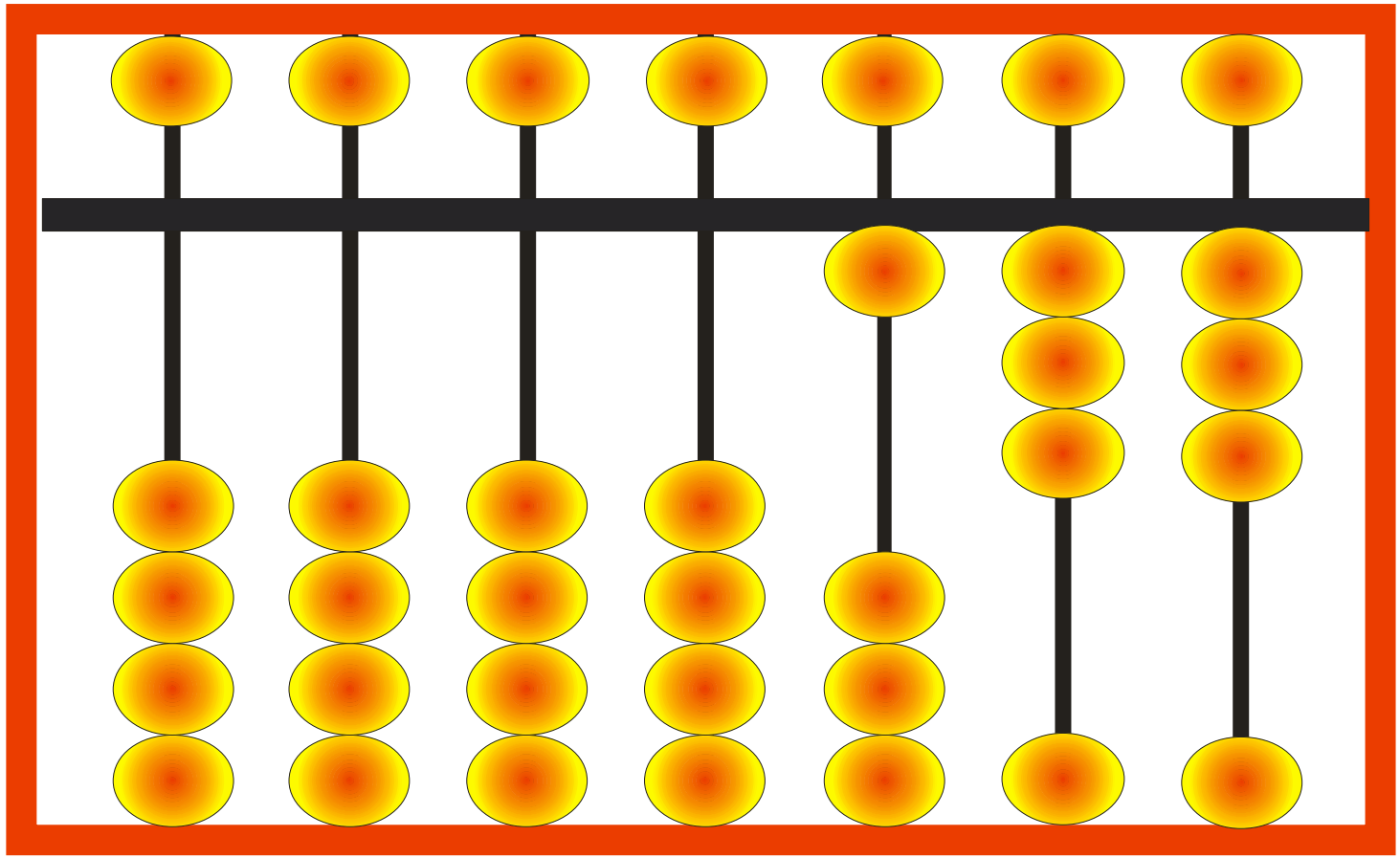


6=10-4 zabieram 10 tzn. koralik w dół; 4 koraliki oddaję do góry



65-56=9

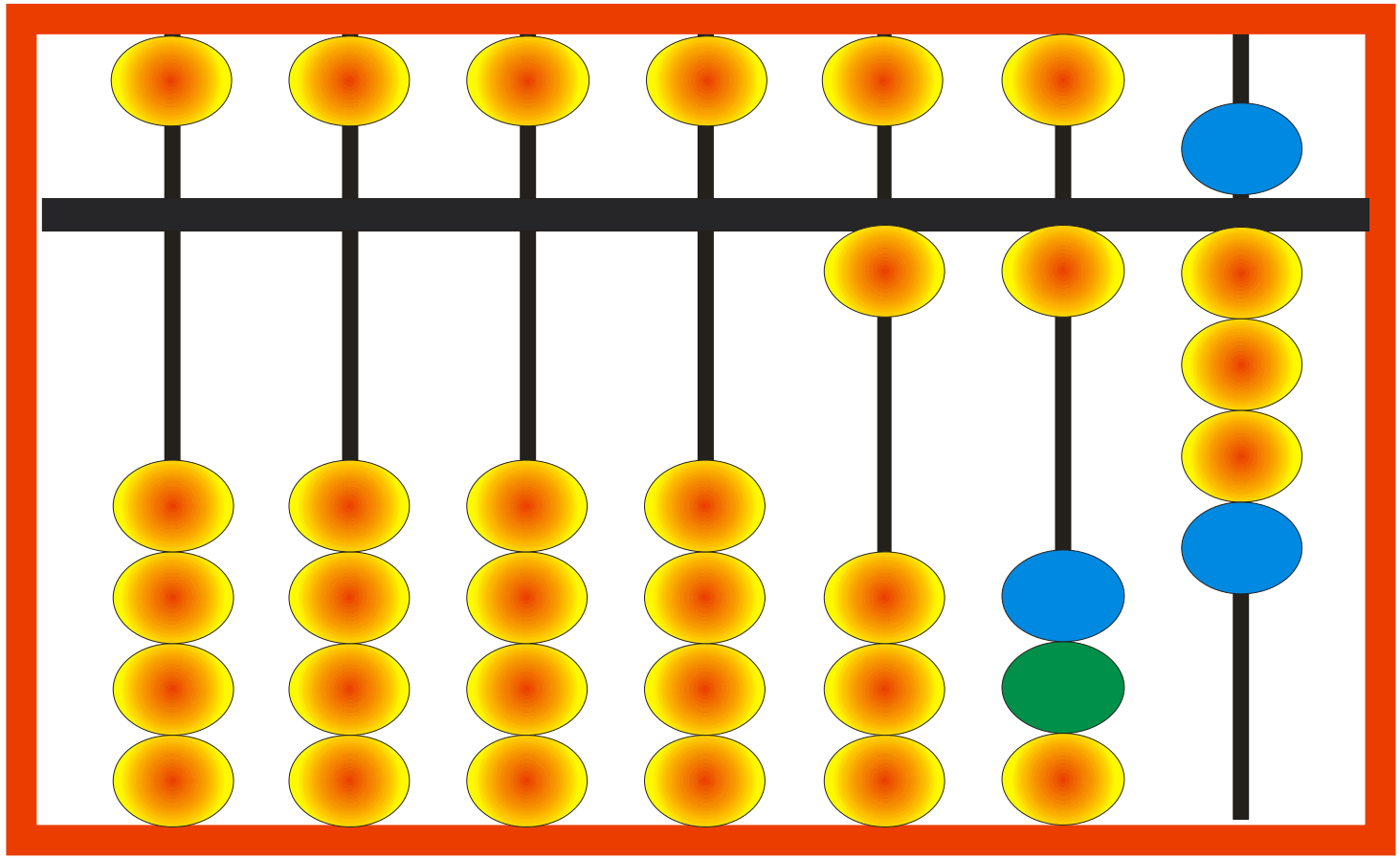
133-14



133-14=119

zabieram 1 koralik (10) i 4 tzn. 4=10-6

zabieram 1 koralik (10) i dokładam 6



http://www.soroban.pl