Set 1

**1a.** 4.2 x 100 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  | . | . |  |
| x 100 |  |  |  |  |  |  |

**1b.** 4.2 ÷ 10 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones  .    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  | . |  |
| ÷ 10 |  |  |  |  |  |  |

**1c.** 20.01 x 100 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths  .    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  |  |  |
| x 100 |  |  |  |  |  |  |

.

**1d.** 640 ÷ 200 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  | .  . |  |
| ÷ 2 |  |  |  |  |  |  |
| ÷ 100 |  |  |  |  | . |  |

**1e.** 6.4 x 200 = \_\_\_\_\_\_\_\_

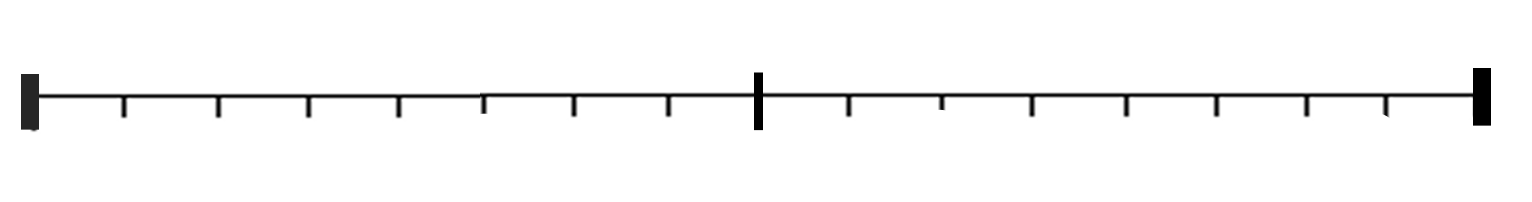
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  | .  . |  |
| X 2 |  |  |  |  |  |  |
| x 100 |  |  |  |  | . |  |

**2a.**

Set 2

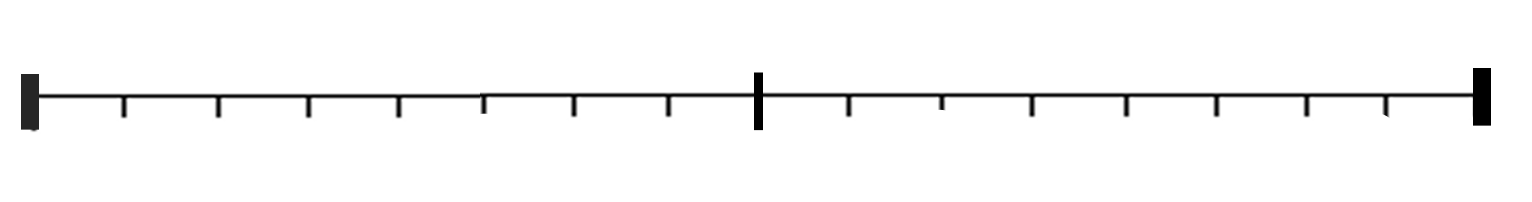
What is this SUM?





1

What is this DIFFERENCE?





1

This is being SUBTRACTED

**2b.**

630 ÷ 300 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  | .  . |  |
| ÷ 3 |  |  |  |  |  |  |
| ÷ 100 |  |  |  |  | . |  |

**2c.** 2.4 x 300 = \_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Thousands | Hundreds | Tens | Ones    1 | Tenths    1    1 | Hundredths    1    1 |
| Before: |  |  |  |  | .  . |  |
| X 3 |  |  |  |  |  |  |
| x 100 |  |  |  |  | . |  |

Set 3

**3a.**

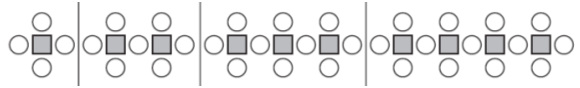


Figure 1 Figure 2 Figure 3 Figure 4

Can you fill in the blanks?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fig 1 | Fig 2 | Fig 3 | Fig 4 | Fig 5 | Fig 6 |
| Number of circles | 4 |  |  |  |  |  |
| Number of squares | 1 |  |  |  |  |  |
| Total number of  circles AND squares | 5 |  |  |  |  |  |



**3b.**

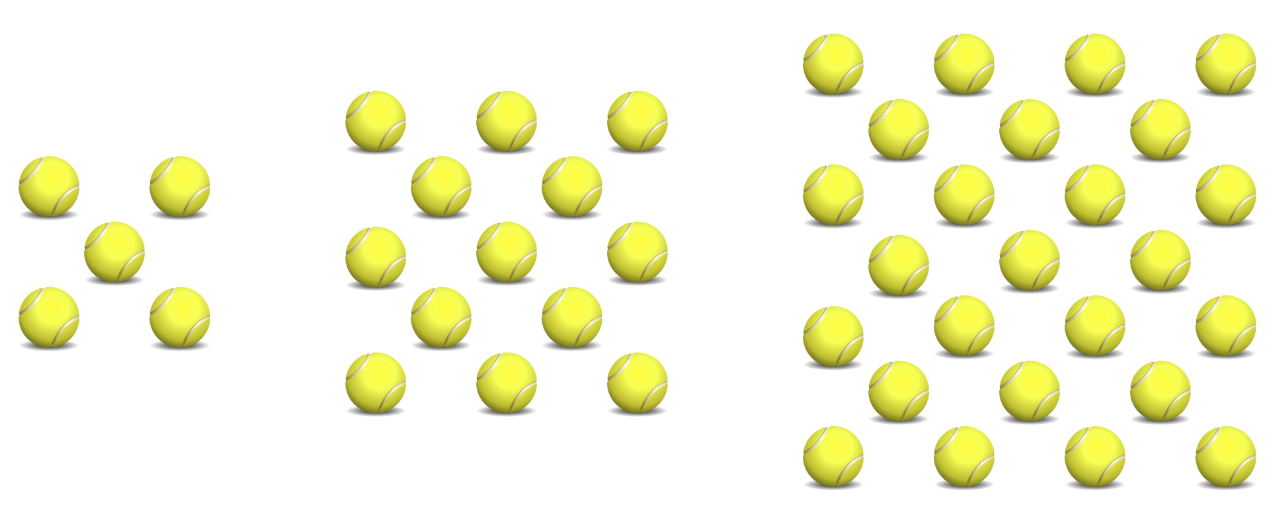




Figure 1

Figure 2

Figure 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Fig 1 | Fig 2 | Fig 3 | Fig 4 |
| Number of tennis balls | 5 |  |  |  |



Set 4

**4a.** We call these figures ‘open squares’ (even though the first two are not actually open) .

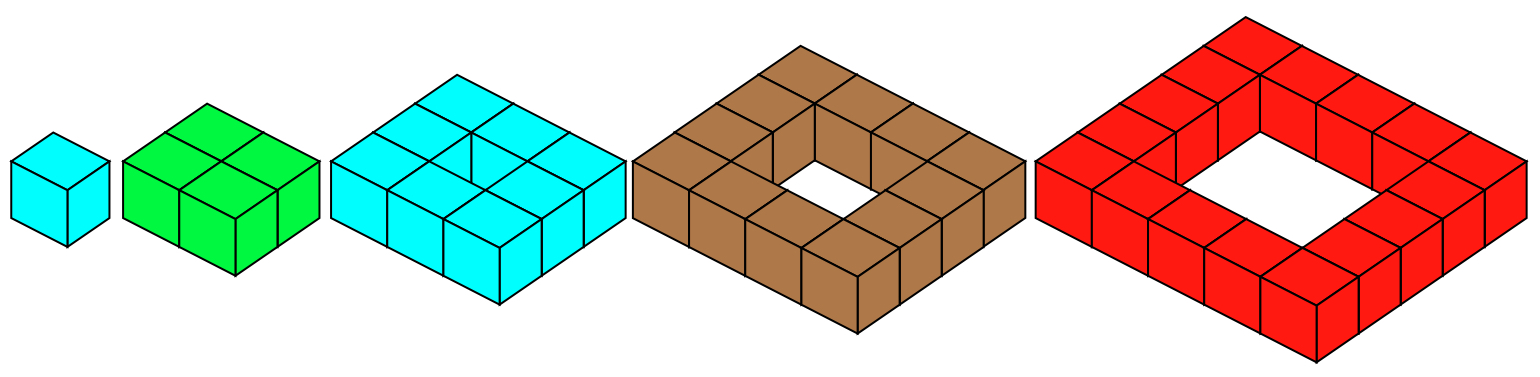


Fig. 1 Fig. 2 Figure 3 Figure 4 Figure 5

Fill in the chart:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fig 1 | Fig 2 | Fig 3 | Fig 4 | Fig 5 | Fig 6 |
| Number of cubes | 1 | 4 | 8 |  |  |  |



**4b.**



We now stack the open squares up to make hollow pyramids, each open square resting on the one that I is the next size bigger.

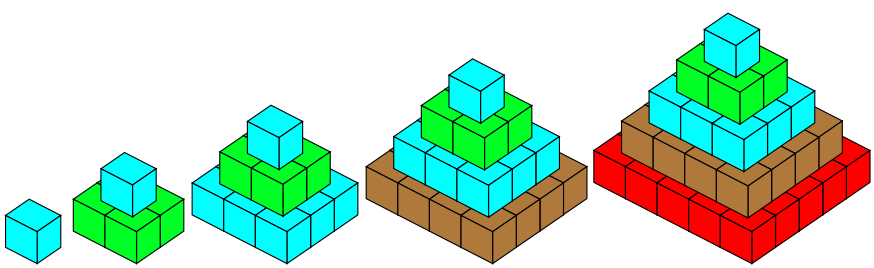
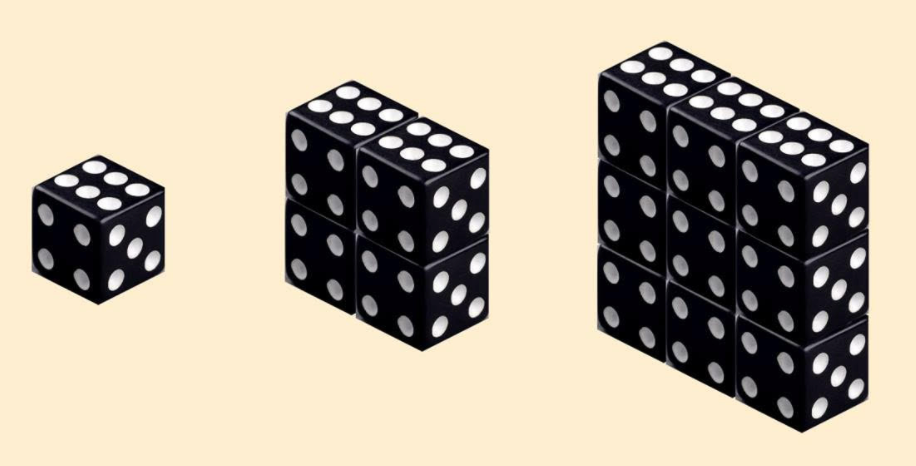


Fig. 1 Fig. 2 Figure 3 Figure 4 Figure 5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fig 1 | Fig 2 | Fig 3 | Fig 4 | Fig 5 | Fig 6 |
| Number of cubes | 1 | 5 |  |  |  |  |



**5a.**

Set 5

Figure 1

Figure 2

Figure 3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fig 1 | Fig 2 | Fig 3 | Fig 4 | Fig 5 | Fig 6 |
| Number of dice | 1 | 4 |  |  |  |  |
| Number of dots **visible** | 15 | 38 |  |  |  |  |



**5b.**



**Binary abacus:** write the stick values , using zeroes and ones, and convert to base ten.



a) **\_\_\_\_\_\_\_\_\_\_\_\_** b) **\_\_\_\_\_\_\_\_\_\_\_\_**



64 32 16 8 4 2 1

64 32 16 8 4 2 1



c) **\_\_\_\_\_\_\_\_\_\_\_\_** d) **\_\_\_\_\_\_\_\_\_\_\_\_**

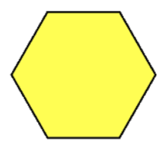


64 32 16 8 4 2 1

64 32 16 8 4 2 1

Set 6

**6a.** *(Simplify answers and do not answer with fractions inside fractions)*

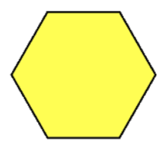


If the hexagon = ,

then the trapezoid = and the triangle =



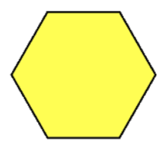
**6b.**  If the trapezoid = ,



then the rhombus = and the hexagon =



**6c.**  If the rhombus = ,



then the trapezoid = , and the hexagon =

