

Sutton Maths Class

Year 5 - Week 9 - Types of Numbers

Starter:

1 $\frac{1}{3} + \frac{7}{10} =$

2 $\frac{2}{15} \times \frac{1}{2} =$

3 What is 0.35 as a percentage?

4 What is $\frac{2}{3}$ as a decimal?

6 What is 0.9 as a percentage?

7 What is 45% as a fraction?

8 $0.1 \times 0.07 =$

9 $(0.3)^2 =$

10 $10 \div 0.1 =$

11 Find $\frac{1}{3}$ of 546m.

12 Find 18% of £2000.

13 What is 5m as a fraction of 2km?

14 What is 600g as a percentage of 5kg?

15 Calculate $-20 - 6$

16 Calculate $-14 - +5$

17 $620 \div -10 =$

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18 $-3 \times -6 =$

19 $(-12)^2 =$

20 What is the highest common factor of 10 and 18?

21 Draw a factor tree for 40 and write 40 as a product of primes.

22 What are the factors of 20? Which of these are prime?

23 Find a and b

$$300 = 2^a \times 3 \times 5^b$$

24 What is the lowest common multiple of 5 and 14?

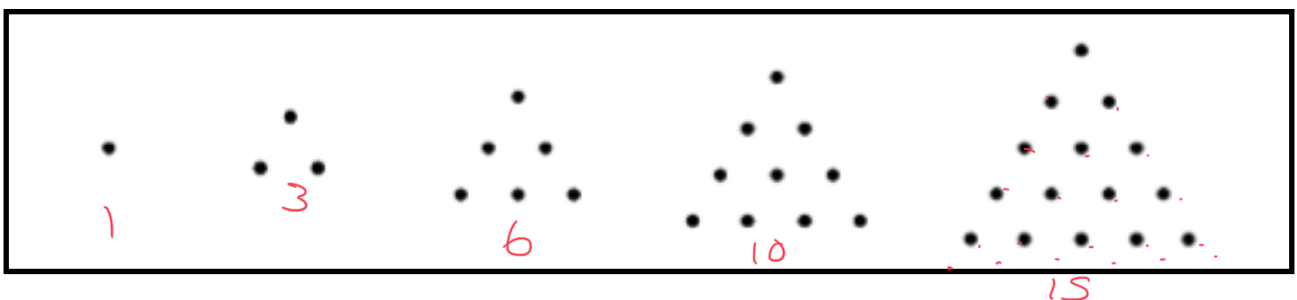
25 What is the highest common factor of 18, 9 and 90?

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Types of Numbers: Odds, Evens, Square Numbers, Triangle Numbers

Questions:

- 1 True or false, the product of two odd numbers is even. Give an example.
false, $5 \times 5 = 25$
- 2 True or false, the product of two even numbers is even. Give an example.
*true, $6 \times 8 = 48$
 $2 \times 2 = 4$*
- 3 The product of an odd and even number is even. Give an example.
 $3 \times 8 = 24$
- 4 List all three digit odd numbers you can make from the digits 4, 2, 7.
427, 247
- 5 If you multiply three even numbers the answer is always even.
 $2 \times 2 \times 2 = 8$
- 6 The product of two even numbers and an odd number is always even.
 $2 \times 2 \times 3 = 4 \times 3 = 12$
- 7 Calculate $6^2 + 5^2$. *$36 + 25 = 61$*
- 8 Calculate $8^2 - 4^2$. *$64 - 16 = 48$*
- 9 What is the 6th square number? *$6^2 = 36$*
- 10 A square has an area of 49cm^2 . What is the length of its side?
 $49 = 7 \times 7$ 7cm
- 11 $15^2 =$ *225*
$$\begin{array}{r} 15 \\ \times 15 \\ \hline 75 \\ 150 \\ \hline 225 \end{array}$$
- 12 $80^2 =$ *6400*
- 13 What is the third cube number? *$3^3 = 3 \times 3 \times 3 = 27$*
- 14 What is the 6th triangular number? *21*



21 28 36

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15 $3^3 = 27$

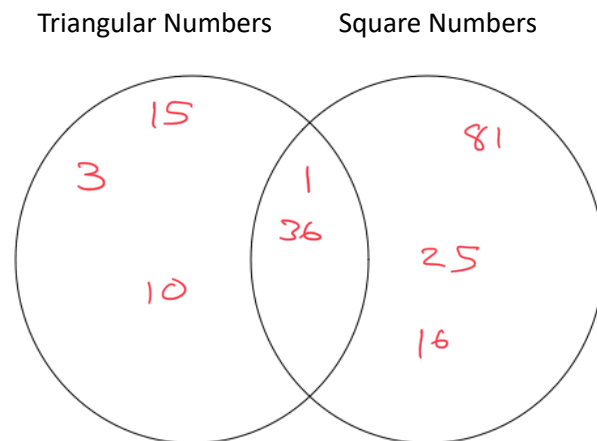
16 Fill in the following blank spaces:

1, 8, 27, $\frac{64}{4^3}$, $\frac{125}{5^3}$

17 Fill in the following blank spaces:

1, 3, 6, $\frac{10}{+2+3}$, 15, $\frac{21}{+4+5+6}$

18 Place the numbers ~~16, 10, 25, 81, 3, 15, 36, 1~~ in the Venn Diagram:

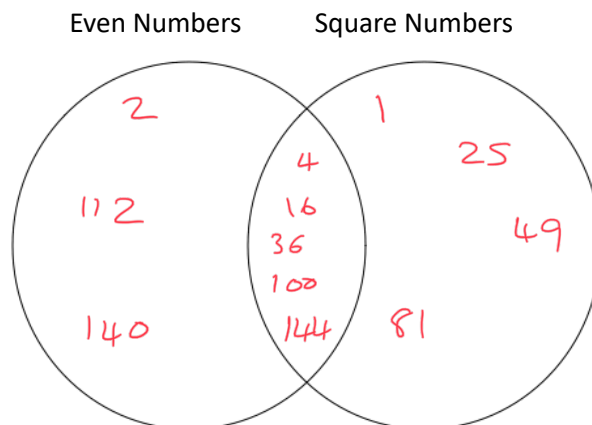


19 What is the fourth cube number? $4^3 = 4 \times 4 \times 4 = 64$

20 Which triangular Numbers under 50 are also even?

$6, 10, 28, 36$

21 Place the numbers ~~1, 2, 4, 16, 25, 36, 49, 81, 100, 112, 140, 144~~ in the following Venn Diagram:

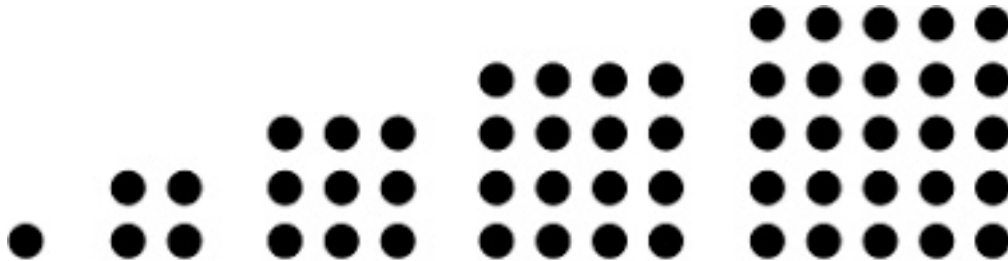


22 Which is the first triangular number that is also a square number? 1

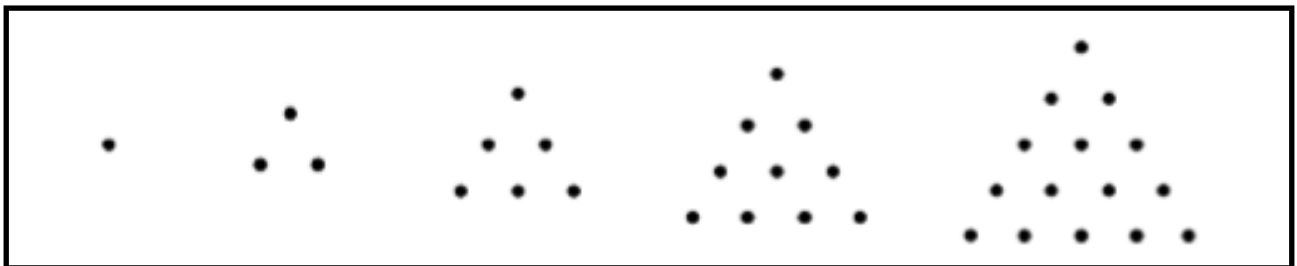
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Type of Numbers

Square numbers:



Triangular Numbers:



Cube Numbers:

$$1 \times 1 \times 1 = 1$$

$$2 \times 2 \times 2 = 8$$

$$3 \times 3 \times 3 = 27$$

$$4 \times 4 \times 4 = 64$$

$$5 \times 5 \times 5 = 125 \dots\dots$$

There are infinitely many square, cube and triangular numbers.