

Sutton Maths Class

Year 5 - Week 13

Starter:

1 $\frac{5}{12} + \frac{1}{6} =$

2 $\frac{2}{3} \times \frac{4}{5} =$

3 What is 0.125 as a percentage?

4 What is $\frac{17}{100}$ as a decimal?

5 What is 5% as a decimal?

6 $0.5 \times 70 =$

7 $(0.08)^2 =$

8 $200 \div 0.5 =$
Hint: How many times does half 'go into' 200?

9 Find $\frac{5}{7}$ of 490g.

10 Find 35% of 500.

11 What is 60p as a fraction of £3?
Hint: write £3 as 300p

12 What is 25cm as a percentage of 5m?

13 Calculate $7 - 28$

14 Calculate $100 + -7$

15 $-180 \div 10 =$

16 $-20 \times -40 =$

17 What is the highest common factor of 36 and 28?

18 Write 80 as a product of primes.

19 What are the prime numbers less than 10?

20 What is the lowest common multiple of 6 and 14?

21 Which of the following are triangular numbers?
10, 15, 20, 25, 30

22 $3^2 + 6 \times 5 =$

23 If $x = 3$, $y = 5$ and $z = 0.5$, calculate $yz + x^2$

24 Simplify 120:45

25 Split £550 in the ratio 1:4

26 Katie and James share 24 marbles in the ratio 2:1. How many marbles does Katie have?

27 Find the next term of 6, 8, 11, 15, 20, ____.

28 Find the n^{th} term of 7, 10, 13, 16 ...

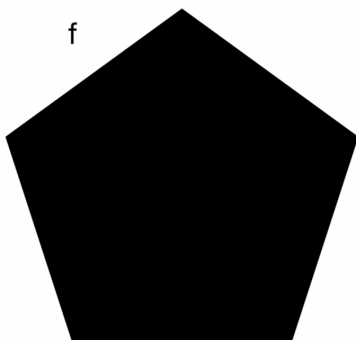
29 Find the 100th term of 7, 10, 13, 16 ...

30 Find the first four terms of the sequence with n^{th} term $7n-5$.

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Questions:

- 1 Write an expression to represent the following:
I think of a number, multiply it by 2 and subtract 5.
- 2 Write an equation to represent the following:
I think of a number, multiply it by 2 and subtract 5. The answer is 19.
- 3 Solve your equation from question 2.
- 4 Write an expression to represent the following:
I think of a number, multiply it by itself and add 2.
- 5 Write an equation to represent the following:
I think of a number, multiply it by itself and add 2. The answer is 11.
- 6 Solve your equation from question 5.
- 7 Write an expression for the perimeter of this regular hexagon:



- 8 Write an expression for the perimeter of this rectangle:



- 9 Solve the following equations:

a $\frac{x}{5} = 6$

b $10x = 70$

c $t - 2 = 80$

d* $15 + x = 10$

e $6a - 1 = 5$

f $7b + 4 = 39$

g $3x - 4 = 11$

h* $8a - 3 = 3a + 7$

i* $10x - 1 = 5x + 9$

- 10 What is the difference between an expression and an equation?

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Beyond 11 Plus (please note some of this is Higher GCSE standard):

11 Solve:

a $\frac{3a + 1}{5} = 10$

b $\frac{3x - 5}{2} = 10$

c $10d - 5 = 12$

d $7e + 5 = 1$

e $-3 = 7x + 4$

f $\frac{x}{6} + 9 = 12$

g^{***} $7x - 5 = \frac{1}{2}x - 10$

h^{**} $6x - 0.5 = 3x + 4$

i^{***} $7 - 2x = 14$

j^{***} $2 - 5x = 7x - 14$

k^{***} $x^2 = 100$

l^{***} $x^2 + x = 6$
Hint: used trial and error.

m^{***} $7 = \frac{6x + 5}{10}$

n^{*} $12 = \frac{8x}{11}$

o^{***} $100 = 100 = \frac{7x - 3}{2}$

p^{****} $\frac{2x}{3} = \frac{5x}{4}$

q^{*****} $2(x + 5) = 10$

r^{*****} $6(x - 3) = 15$

s^{*****} $7(x + 2) = 3(x + 1)$

t^{*****} $8(x - 3) = 3(x - 2)$

r^{*****} $\frac{6x - 10}{5} = \frac{2x - 3}{3}$

s^{*****} $\frac{4x - 1}{2} = \frac{3x + 6}{3}$

t^{*****} $\frac{2 - 7x}{5} = \frac{4x + 1}{3}$