

Sutton Maths Class

Year 4 - Week 11

Starter/Homework:

(Starred questions are optional)

1 Simplify:

a) $\frac{6}{10} = \frac{3}{5}$

b) $\frac{15}{30} = \frac{1}{2}$

c) $\frac{88}{55} = \frac{8}{5}$ or $1\frac{3}{5}$ or 1.6

2 Complete the following:

$$\frac{5}{6} = \frac{?}{42} = \frac{400}{?}$$

Handwritten notes: 35, 480, x7, x80

3 Convert the following improper fractions to mixed numbers:

a) $\frac{40}{3} = 13\frac{1}{3}$ b) $\frac{20}{19} = 1\frac{1}{19}$

c) $\frac{65}{22} = 2\frac{21}{22}$ d) $\frac{400}{30} = 13\frac{1}{3}$

4 Find $\frac{3}{8}$ of 2.4kg. *0.3 x 8 = 0.9kg*

5 Find 65% of 200. *5% = 10, 10% = 20, 60% = 120, 65% = 130*

6 Decreases 20kg by 30%. *20 - 6 = 14kg*

7 Write $2\frac{85}{100}$ as a decimal. *2.85*

8 Round 4.38 to the nearest whole number. *4*

9 Round 5.05 to the nearest whole number. *5*

10 Solve:

a $5x + 2 = 37$ $x = 7$

b* $0.5t = 20$ $20 \div 0.5$ $t = 40$

(hint: think of 0.5 times something as 'half of')

11 I think of a number, subtract 5, multiply it by 4 and the answer is 12. What was the number?

12 a $59 - 80 = -21$

b $-2 - 7 = -9$

c $5 - 31 = -26$

d $-120 - 120 = -240$

e $-45 - 20 = -65$

f $0 - 5 = -5$

g $25 - 300 = -275$

13 a $-6 \times -10 = 60$

b $40 \div -8 = -5$

c $(-9)^2 = 81$

d* $-5 + 3 \times -8 = -29$
(don't forget BIDMAS)

e* $(6)^2 + (-3)^2 = 45$
36 + 9

14 a $55 \div (5 + 6) + 3^2 = 5 + 9 = 14$

b* $(5 \times 2)^2 + (8 \times \frac{1}{2})^2 = 100 + 16 = 116$

(hint: think of 0.5 times something as 'half of')

15** If $x = 2$, $y = -3$ and $z = 5$ find:

a $x \times z = 10$

b $x^2 + z^2 = 29$

c $x \times y + z = -1$

d $y^2 + x - y = 6$
9 + 2 - 5

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Questions:

- 1 Which of the following are equivalent ratios?
- 18 : 3 16:10 80 : 50
- 8 : 1 16 : 10 36 : 6
- 8 : 5 6 : 2 120:40
- 9 : 4 32 : 20 18 : 8
- 2 Simplify the following ratios:
- a 100 : 30 b 20 : 14
- c 16 : 8 d 25 : 15
- e 7 : 70 f 28 : 35
- g* 6 : 14 : 20
- h* 40 : 20 : 100
- i* 14 : 35 : 70
- j* 56 : 80 : 800
- k* 13 : 26 : 130
- 3 Jane has 5 marbles for every 10 marbles Katy has. If Jane has 50 marbles in total, how many does Katy have?
- 4 James buys 4 pens for 80p.
- a How much does one pen cost?
- b How much would 8 pens cost?
- c How much would 5 pens cost?
- 5 Ahmed and Sara work in a cafe. They are paid the same amount for each hour they work. Ahmed worked 3 hours and was paid £21. Sara worked 5 hours, how much did she get paid?
- 6 On a map 1cm represents 5km. How many km are represented by 4cm on the map?
- 7 A cake recipe that makes 12 cakes uses the following ingredients:
- 200g flour
200g sugar
200g butter
3 eggs
- Fay wants to make 24 cakes.
- a How much butter should she use?
- b How many eggs should she use?
- c* If she only makes 6 cakes how much flour should she use?
- d*** Butter is sold in packs of 200g. How many packs are needed to make 30 cakes?

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8*** On a map 1cm represents 12 miles.

a The distance between two towns is 60 miles, how much will this be on the map?

b*** The distance between two towns on the map is 66 miles. On the map this will be ____ mm.

9* For every two blue sweets George has, John has 5 green sweets. John has 30 green sweets, how many blue sweets does George have?

10** For every **eight** 10p coin Tahir has, he has **two** 50p coins. Tahir has £12 in 50p coins. How much does he have **altogether**?

11* Split £300 in the ratio of 3:2.

12* Split 4000g in the ratio of 5:3.

13* Split £5600 in the ratio of 4:3.

14* Split £2500 in the ratio of 1:4.

15** Split £800 in the ratio of 3:2:1.

16** Daniel and Hannah split some sweets in the ratio of 5:4. They have 90 sweets altogether. How much do they each get?

17**** Kerry and Becky split 400 marbles in the ratio of 3:2.

a How many marbles does Becky have?

b How many does Kerry have?

c How many more does Kerry have than Becky?

d Kerry give Becky 100 of her marbles. What is the new ratio?

18*** James has £1, 50p and 20p coins in the ratio of 5:3:2. He has £15 in £1 coins. How much does he have altogether?

