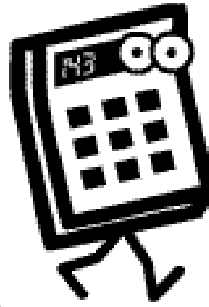# BOOGLES

Boogles Ltd

MAKING NUMBERS FUN!

MATHS MONEY WORKSHEETS

Age 9-11yrs: Complex Numbers

Equipment Needed

Paper – plain or lined
Pencil, pencil sharpener, ruler
Eraser / rubber
Thinking cap

Boogles Ltd

Percentages £

Work out….

1. 21 % of £340

2. 9% of £3700

3. 17.5% of £420

4. 5% of £79.85

5. 80% of £92.98

6. 117.5% of £92.40

7. 15% of £93.82

8. 35% of £7.05

9. 75% of = £72.90

10.   60% of £13.50

11.   Trainers cost £50 plus 17.5% VAT. How much are they in total?

12.   A Set of golf clubs was £387, but there is 10% knocked off. What is the new sale price PLUS 17.5% VAT?

13.   A car costs £7297 plus 17.5% VAT. How much does the car cost?

14.   VAT has been reduced by 2.5%. The trainers are now £50 + 15% vat. How much are the trainers?

15.   The car is now £7297 plus 15% vat. How much is the car?

16.   A brand new car costs £16,500. A discount of £2,227.50 is negotiated. What is the percentage discount?

17.   A Laptop costs £675 plus VAT at 17.5%. How much is the laptop?

18.   A mobile phone is normally £82, but there is a sale, and it's got 12% off. What is the new price?

19.   You can get 2000 minutes and 200 texts for £63 plus vat of 17.5%. Or 1500 minutes and 250 texts for £79. Assuming texts are 5p. How much are the minutes in contract 1 (2000 mins). How much are the minutes in contract 2?

20.   Boogles has a telephone answering service. Zoom will answer 30 calls for £79 and then it's £0.99 per call. Yoom will answer 50 calls for £72 and then it's £1.50 per call. If Boogles normally get 50 calls a month - which is the better deal? If Boogles gets 75 calls a month, which is the better deal? If Boogles gets 100 calls a month, which is the better deal?

21.	¾ of £28?	2/3 of £60	7/8 of £4000
22.	£60 x 1/3	5/7 of £820	£49 x 4/7
23.	5/60 x £56	£90 – 16%	£846 - £15

24.   A digital camera that originally cost £49 was sold on e-bay for 2/7 of the original cost. What was the selling price?

Fractions and Money

a) Kelly spent her £3.00 pocket money this way:
7/20 on chocolate, ¼ on magazines, 4/10 on games. How much did she spend in each area?

b) Eduardo spent 2/5 of his pocket money on magazines, and 1/10 of his pocket money on games. What fraction of his money did he have left?

c) Amy buys a bag of floor. She uses ¼ to make pancakes and 2/5 to bake a cake. What fraction of the floor was used? What fraction of the floor is left?

d) There are n items in the shopping. 60% is food for the baby. 40% is food for the cat. If n=15, how many items are for the cat?

e) 7/20 of Shaun's wages are paid to Mrs Maxims for rent. He spends 4/20 on food. If he earns £105 – how much does he pay for rent and food in total?

Ratios and Money

f) Share out £250 in the following ratios:
i. 1: 4   ii. 2: 4: 9   iii. 2: 5: 3   vi. 5:2:2

g) Share out the lottery winnings equally - £18,492.75 between Ellie, Annie and Sherrie.

h) Charlotte splits her £15.00 in the following ratio: 3/10 save, 1/10 to charity. How much does she save? How much does she donate? How much is left?

Value for money

1. Which of the following offer better value for money?

   a)   200ml of toothpaste for 50p or 400ml of toothpaste for 90p?

   b)   600g of apples for 90p at 200g of bananas for 19p?

   c)   2 litres of paint for £1.60 or 5 litres of paint for £3.50?

   d)   60 teabags for £1.62 or 40 teabags for £0.96?

   e)   75ml of water for 70p or 135ml of water for £1.50?

   f)   20 exercise books for £4.00, or 35 exercise books for £7.80?

   g)   14 pencils for £1.99 or 50 pencils for £6.99?

   h)   Juliet needs to buy 2 litres of paint. At the shop she has 2 choices: ½ litre for £2.55 or 1 litre for £4.79? What is the difference between the 'best' buy and the 'worst buy'?

   i)   Jam is sold in 2 sizes: a small pot costs 45p and weights 450g. A large pot costs 80p and weights 850g. Which is the best buy?

   j)   Kumara can buy 5 books for £8.60 or 3 books for £4.95. Which is the best deal?

   k)   Cherry can buy in bulk 43 scarves for £9.46 or singularly for 19p each. Which is best?

   l)   Brian can rent a car for £7.48 ph or £43.40 for the first day and £38.90 per day for each extra day. (A day is 6 ¼ hours). I. Which is the best deal if Brian wants the car for 1 whole day? II. What is the best deal if he wants the car for 3 whole days?

   m)   John can buy one CD for £1.73 or 5 for £8.99 – what is the best deal?

   n)   Joe can buy a single bus ticket for 90p, or a booklet of 9 journeys for £10.00 - what is the best deal?

Long Multiplication of Decimals

a)   7 x £4.30

b)   5 x £3.17

c)   2.3 x £1.20

d)   7.2 x £42.70

e)   12.5 x £0.60

f)   £0.63 x 5

g)   £5.24 x 3

h)   £34.28 x 52.1

i)   £1.56 x 3.53

j)   £1.72 x 4.32

k)   £1.42 x 2.32

l)   £3.12 x 34.1

m)   £3.71 x 3.1

n)   £93.81 x 72.1

o)   42.1 x £33.25

p)   81.1 x £42.87

q)   42.2 x £49.79

r)   92.1 x £32.15

s)   32.4 x £59.87

t)   £1.92 x 40.1

u)   £39.67 x 7.2

Percentage Increase and Decrease (£)

1. An art dealer is comparing her sales over the past two years.

In 2007, she sold 175 paintings

In 2008, she sold 196 painting.

What is the percentage increase in the number of cars sold?

2. In Jan 2008 the number of Boogles Kids members was 1014. In Jan 2009, the number of members was 1352. What is the percentage increase in the kid's club membership?

3. The usual price of the jeans is £28.50, but in a sale the jeans are reduced to £24.00. What is the percentage reduction?

4. Martin opened an account at the Boogles Bank with £550. After one year, the bank paid him interest. He then had £595 in his account. What is the Bank of Boogles interest rate?

5. Merlin bought some items at a car boot sale and then sold them on ebay. Work out the percentage profit or loss he made on each of these items:

   i.   Trainers bought for £16, sold for £21
   ii.   Mobile phone bought for £43, sold for £93.20
   iii.   A gold bracelet bought for £80, sold for £45
   iv.   Video bought for £12 sold for £4
   v.   An iron bought for £22, sold for £14
   vi.   A washing machine bought for £180, sold for £185

6. Kyrece buys a house for £180,000 and sells it two years later for £195,000. What is his percentage profit?

7. The cost of bookkeeping was £19ph, and increased to £24ph. What percentage does this represent?

Compound Interest (£)

1. Polly places £5000 in an account, which pays 4.2% compound interest each year. How much does she have at the end of year 2?

2. Caroline deposits £6,000 into an account, which pays 5.8% compound interest per year. How much will she have in her account, at the end of year 5?

3. Yvonne places £230 in an account, which pays 2.8% compound interest per year. How much will she have in her account at the end of 3 years?

4. Dylan puts money into an account, which pays 3.2% compound interest per year. If he puts in £13,500 in the account for 4 years. How much interest will he earn altogether?

5. Jasmine puts £3,600 into the bank in January. The bank pays 0.26% interest every month. A. How much money will she have in her account in total, at the end of February? B. How much total interest will she have earned after 5 months? C. At the end of the year, how much i. interest will she have earned? ii. How much cash in total will she have in her account?

Depreciation (£)

Depreciation is an accounting principle whereby the cost of goods are written down to account for the fact that they undergo 'wear and tear'. The whole point of depreciation is to ensure that we recognise that items are not "worth" what we paid for them initially.

1. Gavin buys a new car for £17,600. The annual rate of deprecation is 23%. How much is the car worth after 3 years?

2. Scott pays £4,200 for a second-hand car. The annual rate of depreciation of the car is 24%. How much will it be worth 4 years after he has bought it?

3. Julian places £17,000 in an account that pays 4% compound interest per year. How many years will it take before he has £19,122.68 in the bank?

4. Eleanor bought a new moped for £8,900. The annual rate of depreciation is 18% per year. After how many years will it be worth £2,705.66?

5. The rate of depreciation for Jessica's new £699 laptop is 35% per year. How much is the laptop worth after 24 months?

6. If plant & machinery in Fred's Fabric Factory was bought for £19,000 5 yrs ago, and is depreciated by 20% each year, what is it worth now?

Reverse Percentages £

1. In a sale, normal prices are reduced by 20%. The sale price of the jeans is £19.95. What is the normal price of those jeans?

2. In a sale, normal prices are reduced by 18%. The sale price of the 3-piece suite is £982.62. What is the normal price of that furniture?

3. Carl's Car Dealership offers a discount of 15% off the normal price of a car for cash. Emily pays £6,120 cash for a car. Calculate the normal price of the car.

4. Grant gets a basic wage of £160 per week plus a commission of 30% of the sales he makes that week. In one week his total wage was £640. Work out the value of sales he made that week.

4. The price of all rail season tickets to Boogie Town increased by 4%. I. The price of a rail season ticket from London to Boogie Town increased by £122.40. What was the price before the increase?

II. After the increase the price of a rail ticket from London to Boogie Town was £2932.80. What was the price before the increase?

5. Erica gets a basic wage of £105 per week plus a commission of 18% of the sales he makes that week. In one week his total wage was £524. Work out the value of sales she made that week.

6. Camille's weekly pay this year is £960. This is 20% more than his weekly pay last year. Tessa says, "This means Camille's weekly pay last year was £768." Tessa is wrong. Explain why. How much was Camille's weekly pay last year?

7. Simon opened an account with the Bank of Boogles last year. Boogles' interest rate was 4%. Now, one year later, the bank has paid him interest. If Simon now has £1,976, then what did he open his account with?

Converting Pounds to Foreign Currency

1. Rose went on holiday to the Eastern Caribbean. The exchange rate is £1 = $4.90 EC. She changes £260 into $EC. A) How many dollars did she get? B) She bought a DVD player for $89 EC. What is this cost in pounds?

2. Jasmine went to Florida in the winter. The exchange rate was £1 to $1.48. Jasmine got $1800. How many pounds did she have?

3. Hyacinth bought a house in the South of France. The cost was 200,000 euros, and the exchange rate was 1 euro = 78p. a) How much did she pay for the house in pounds? 3 years later, she went to put the house up for sale. The house was valued at 250,000. The exchange rate was now 1 euro = 68p. b) How much is the house worth in pounds sterling? c) What percentage has the house increase by in 3 years? Is the exchange rate better now or 3 years ago? d) What is the percentage change in the value of the currency?

4. Pansy bought 5 bottles of gin in Ireland for 42 euros. If the exchange rate is 1 euro = 65p. What is the cost in pounds?

5. Daisy is going to New York next week. The exchange rate is £1 to $1.84. She has £500 to change. A) How many dollars will she get? B) Compared to the rate that Jasmine got, who got the better deal? C) What is the percentage change in the exchange rate?

6. Kylie buys a gold chain in Canada. She can pay either $100 Canadian or $70 Australian. £1 = $2.10 Canadian and £1= $1.40 Australian. She pays in Canadian, rather than Australian dollars. Work out how much she saves. Give your answer in pounds.

Direct & Inverse Proportions

a)   *x* is directly proportional to *y*. When *x* = £21, then *y* = £3

   i.   Find the value of *x*, when *y* = 1

   ii. Find the value of *x*, when *y* = 2

   iii. Find the value of *x*, when *y* = 0

b)   *a* is inversely proportional to *b*. When *a* = £12, then *b* = £4.

   i.   Find the value of *a*, when *b* = 8

   ii. Find the value of *b*, when *a* = 4

   iii. Find the value of *a*, when *b* = 0

c)   The variables *r* and *t* are in inverse proportion to one another.

   When *r* = £3, then *t* = £8.

   i.   Find the value of *r*, when *t* = £12

   ii. Find the value of *t*, when *r* = 0