#### Pocket Money calculations worksheet 1

Complete the missing information in the table and answer the follow-up questions.

#### Penny

Penny gets £1 pocket money in the  $1_{st}$  week, then £1 more in the  $2_{nd}$  week (£2), and £1 more in the  $3_{rd}$  week (£3) and £1 more each week after.

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	2	3	4								
Total so far (£)	1	3	6									

- a. When does Penny's total pocket money become more than £50? (if she saves it all)
- b. In which week does Penny first get £50 for the week?
- c. When does Penny's total pocket money become more than £100? (if she saves it all)
- d. In which week does Penny first get £100 for the week?
- e. Does Penny get twice as much pocket money in the 10th week as the 5th?
- f. Does Penny have twice as much total pocket money in the 10th week as the 5th week?
- **g.** How long would it take before Penny gets a million pounds for the week (in years)?

#### Pocket Money calculations worksheet 2

Complete the missing information in the table and answer the follow-up questions.

#### Bob

Bob gets £1 pocket money in the  $1_{st}$  week, then £10 more in the  $2_{nd}$  week (£11), and £10 more in the  $3_{rd}$  week (£21) and £10 more each week after.

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	11	21	31								
Total so far (£)	1	12	33									

- a. When does Bob's total pocket money become more than £100? (if he saves it all)
- b. In which week does Bob first get more than £100 for the week?
- c. When does Bob's total pocket money become more than £1000? (if he saves it all)
- d. In which week does Bob first get more than £1000 for the week?
- e. Does Bob get twice as much pocket money in the 10th week as the 5th?
- f. Does Bob have twice as much total pocket money in the  $10{\rm th}$  week as the  $5{\rm th}$  week?

#### Pocket Money calculations worksheet 3

Complete the missing information in the table and answer the follow-up questions.

#### Millie

Millie gets £1 pocket money in the 1st week and £1 in the 2nd week. Then in the 3rd week she gets £1 + £1 = £2, and in the 4th week £1 + £2 = £3, and in the 5th week £2 + £3 = £5, and so on, always receiving the sum of the previous 2 weeks as pocket money the week after.

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	1	2	3	5							
Total so far (£)	1	2	4	7								

- When does Millie's total pocket money become more than £100? (if she saves it all)
- b. In which week does Millie first get more than £100 for the week?
- c. When does Millie's total pocket money become more than £1000? (if she saves it all)
- d. In which week does Millie first get more than £1000 for the week?
- e. Does Millie get twice as much pocket money in the 10th week as the 5th?
- f. How long would it take before Millie gets a million pounds for the week?

#### Pocket Money calculations worksheet 4

Complete the missing information in the table and answer the follow-up questions.

#### Mr Moneybags

Mr Moneybags gets £1 pocket money in the  $1_{st}$  week, then double in the  $2_{nd}$  week (£2), and double again in the  $3_{rd}$  week (£4) and double each week after.

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	2	4	8								
Total so far (£)	1	3	7									

- a. When does Mr Moneybags' total money become more than £100? (if he saves it all)
- b. In which week does Mr Moneybags first get more than £100 for the week?
- **c.** When does Mr Moneybags' **total** money become more than £1000? (if he saves it all)?
- d. In which week does Mr Moneybags first get more than £1000 for the week?
- e. What do you notice about the week's money and the total so far?
- f. In the 15th week Mr Moneybags gets £16,384. What will his total be?

## Pocket money calculations on the calculator

# Answers

### Penny

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	2	3	4	5	6	7	8	9	10	11	12
Total so far (£)	1	3	6	10	15	21	28	36	45	55	66	78

- **a.** Week 10
- **b.** Week 50
- **c.** Week 14
- d. Week 100
- e. Yes
- f. No
- g. 1,000,000 weeks = 19,178 years

#### Bob

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	11	21	31	41	51	61	71	81	91	101	111
Total so far (£)	1	12	33	64	105	156	217	288	369	460	561	672

- a. Week 5
- **b.** Week 11
- **c.** Week 15
- d. Week 101
- e. No
- f. No

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	1	2	3	5	8	13	21	34	55	89	144
Total so far (£)	1	2	4	7	12	20	33	54	88	143	232	376

#### Millie

- **a.** Week 10
- **b.** Week 12
- **c.** Week 15
- d. Week 17
- e. No
- f. 31 weeks

#### Mr Moneybags

Week Number	1	2	3	4	5	6	7	8	9	10	11	12
Week's Money	1	2	4	8	16	32	64	128	256	512	1024	2048
Total so far (£)	1	3	7	15	31	63	127	255	511	1023	2047	4095

- a. Week 7
- b. Week 8
- **c.** Week 10
- d. Week 11
- e. It's double minus one
- **f.** £32,767