## 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 3rd 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 10 th week as the 5 th ?
f. Does Penny have twice as much total pocket money in the 10 th week as the 5 th 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 10 th week as the 5 th ?
f. Does Bob have twice as much total pocket money in the 10 th week as the 5 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 1 st week and $£ 1$ in the 2 nd week. Then in the 3 rd week she gets $£ 1+£ 1=£ 2$, and in the 4 th week $£ 1+£ 2=£ 3$, and in the 5 th 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 |  |  |  |  |  |  |  |  |

a. 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 10 th week as the 5 th?
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 15 th week Mr Moneybags gets $£ 16,384$. What will his total be?

## 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

## Millie

| 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 |

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. $£ 32,767$

