PERCENTAGE MULTIPLIERS

Task 1

1) Write the multiplier for 38%
   = 0.38
2) Write the multiplier for 12%
   = 0.12
3) Write the multiplier for 85%
   = 0.85
4) Write the multiplier for 100%
   = 1
5) Write the multiplier for 60%
   = 0.6
6) Write the multiplier for 25%
   = 0.25
7) Write the multiplier for 75%
   = 0.75
8) Write the multiplier for 5%
   = 0.05
9) Write the multiplier for 10%
   = 0.1
10) Write the multiplier for 20%
    = 0.2
11) Write the multiplier for 99%
    = 0.99
12) Write the multiplier for 1%
    = 0.01
13) Write the multiplier for 11.5%
    = 0.115
14) Write the multiplier for 2.5%
    = 0.025
15) Write the multiplier for 3.25%
    = 0.0325

Task 2

16) Work out the multiplier to increase by 15%
    = 1.15
17) Work out the multiplier to increase by 20%
    = 1.2
18) Work out the multiplier to increase by 50%
    = 1.50
19) Work out the multiplier to increase by 5%
    = 1.05
20) Work out the multiplier to increase by 80%
    = 1.8
21) Work out the multiplier to increase by 2%
    = 1.02
22) Work out the multiplier to increase by 67%
    = 1.67
23) Work out the multiplier to increase by 100%
    = 2
24) Work out the multiplier to increase by 0.5%
    = 1.005
25) Work out the multiplier to increase by 33%
    = 1.33
26) Work out the multiplier to increase by 60%
    = 1.6
27) Work out the multiplier to increase by 1.5%
    = 1.015
28) Work out the multiplier to increase by 200%
    = 3
29) Work out the multiplier to increase by 13.5%
    = 1.135
30) Work out the multiplier to increase by 0.75%
    = 1.0075

Task 3

31) Work out the multiplier to decrease by 15%
= 0.85

32) Work out the multiplier to decrease by 25%
= 0.75

33) Work out the multiplier to decrease by 40%
= 0.6

34) Work out the multiplier to decrease by 60%
= 0.4

35) Work out the multiplier to decrease by 10%
= 0.9

36) Work out the multiplier to decrease by 46%
= 0.54

37) Work out the multiplier to decrease by 5%
= 0.95

38) Work out the multiplier to decrease by 1%
= 0.99

39) Work out the multiplier to decrease by 0.5%
= 0.995

40) Work out the multiplier to decrease by 33%
= 0.67

41) Work out the multiplier to decrease by 70%
= 0.3

42) Work out the multiplier to decrease by 90%
= 0.1

43) Work out the multiplier to decrease by 21.5%
= 0.785

44) Work out the multiplier to decrease by 4.35%
= 0.9565

45) Work out the multiplier to decrease by 100%
= 0

Task 4

46) A coat costs £80. The cost is reduced by 25%. What is the sale price?

80 × 0.75 = 60

£60

47) A bike costs £300. The price increases by 10%. What is the new price?

300 × 1.10 = 330

£330

48) A TV costs £500. The cost is reduced by 15%. What is the new price?

500 × 0.85 = 425

£425

49) A computer costs £900. The price increases by 20%. What is the new price?

900 × 1.20 = 1080

£1080

50) A bag was £40. It is reduced by 10%, then another 20%. What is the final price?

40 × 0.90 = 36

36 × 0.80 = 28.8

£28.80

51) A phone costs £600. A 25% discount is applied, then 5% VAT is added to the discounted price. What is the final price?

600 × 0.75 = 450

450 × 1.05 = 472.5

£472.50

52) A sofa costs £1000. It goes up by 15%, then down by 10%. What is the final price?

1000 × 1.15 = 1150

1150 × 0.90 = 1035

£1035

53) A concert ticket costs £50. There's a 20% discount for students. A 10% booking fee is then added to the discounted price. What is the final ticket price for a student?

50 × 0.80 = 40

40 × 1.10 = 44

£44

54) A holiday package is £1200. The package increases by 5%, then decreases by 10%. What is the final price of the holiday package?

$1200 \times 1.05 = 1260$

$1260 \times 0.90 = 1134$

£1134

55) A printer costs £250. The cost is reduced by 12%, and a £20 voucher is then applied to the discounted price. What is the final price of the printer?

$250 \times 0.88 = 220$

$220 - 20 = 200$

£200

Challenge

56) A product price is increased by 10%, then decreased by 10%. Is the final price the same as the original? Justify your answer.

$1 \times 1.10 = 1.1$

$1.1 \times 0.9 = 0.99$

No, it is less than the original price

57) A company makes £50,000 in revenue. Costs rise by 8%, and profits fall by 12%. If the original profit was 30% of revenue, what is the new profit?

Original profit = $50000 \times 0.30 = 15000$

New profit = $15000 \times 0.88 = 13200$

£13,200

58) A £2000 investment grows by 12% in year one, 10% in year two, and x% in year three. If the total value after three years is £2661.12, work out the value of x.

$2000 \times 1.12 = 2240$

$2240 \times 1.10 = 2464$

$2661.12 - 2464 = 197.12$

$\frac{197.12}{2464} \times 100 = 8\%$

8%