2.8-2 Money Problems: Practice Set 2: 30-minute Pack

GL ASSESSMENT GL · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Louis puts £180 into a savings account paying 3% simple interest per year. Work out the interest earned after 1 year.

- ☐ A) 3.60
- ☐ B) 5.40
- ☐ C) 5.80
- ☐ D) 6.00
- ☐ E) 18.00

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2 A recipe for 6 people costs £9.60 in ingredients. Aaliyah wants to make enough for 15 people. Assuming the cost is directly proportional to the number of people, work out the cost for 15 people.

- ☐ A) 16.00
- ☐ B) 20.00
- ☐ C) 22.40
- ☐ D) 24.00
- ☐ E) 28.80

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3 Declan has only 20p coins and 5p coins in his money box. He has 21 coins altogether, worth £3.15 in total. Work out how many of each coin he has.

(4)

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4 A meal out costs £32 before a 12% service charge is added. Work out the total cost including the service charge.

- [ ] A) 28.16
- [ ] B) 33.20
- [ ] C) 34.24
- [ ] D) 35.84
- [ ] E) 36.00

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5 Hana buys a dress in a sale. It is reduced from £45 to £36. Work out the percentage reduction.

- [ ] A) 9%
- [ ] B) 15%
- [ ] C) 18%
- [ ] D) 20%
- [ ] E) 25%

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6 A cafe bill comes to £54. A 10% service charge is added, then the total is split equally between 4 friends. Work out how much each friend should pay.

- [ ] A) 13.50
- [ ] B) 14.85
- [ ] C) 15.00
- [ ] D) 16.20
- [ ] E) 59.40

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7 Nadia buys 3 identical notebooks costing 90p each. Work out the total cost.

- [ ] A) 2.60
- [ ] B) 2.70
- [ ] C) 2.80
- [ ] D) 2.90
- [ ] E) 3.60

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8 After a 40% deposit has been paid, £108 remains owing on a laptop. Work out the total price of the laptop.

- ☐ A) 151.20
- ☐ B) 162.00
- ☐ C) 168.00
- ☐ D) 180.00
- ☐ E) 270.00

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9 Tariq invests £600 in a savings account.

(a) The account pays 4% simple interest per year. Calculate the total amount in the account after 3 years. **(3)**

.....

(b) Suppose instead the account pays 4% compound interest per year (interest is added to the balance and then itself earns interest). Calculate the total amount after 2 years. **(3)**

.....

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10 A shop offers 25% off in a sale. Niamh also has a loyalty card giving a further 10% off the sale price. A jacket originally costs £80. Work out the final price Niamh pays.

- ☐ A) 48.00
- ☐ B) 52.00
- ☐ C) 54.00
- ☐ D) 56.00
- ☐ E) 60.00

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11 Priti wants to buy a tablet costing £235. She has already saved £58 and saves £15 every week from now on. Work out the least number of whole weeks she needs to save for her total savings to be at least £235.

(3)

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12 Finn buys a sofa priced at £540 before VAT is added at 20%.

(a) Calculate the price of the sofa including VAT. **(2)**

.....

(b) In a later sale, the VAT-inclusive price is reduced by 25%. Calculate the final sale price. **(3)**

.....

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13 Rhys, Esme and Kofi sell some old toys and share the money between them. Rhys receives £6 more than Esme. Kofi receives three times as much as Esme. Altogether they receive £51. Work out how much Kofi receives.

- ☐ A) 9
- ☐ B) 15
- ☐ C) 18
- ☐ D) 24
- ☐ E) 27

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14 Malachy, a market trader, buys apples at a wholesale price of £0.80 per kg and sells them at £1.35 per kg.

(a) Calculate his profit per kg. **(1)**

.....

(b) Calculate his profit as a percentage of the wholesale price, giving your answer to 1 decimal place. **(2)**

.....

(c) One day Malachy buys 45 kg of apples, but 20% of them are damaged and cannot be sold. He sells the rest at £1.35 per kg. Calculate his total profit for the day (income from sales minus the cost of all 45 kg bought). **(3)**

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Mark scheme · 2.8-2 Money Problems: Practice Set 2: 30-minute Pack

Question 1

B) 5.40 - correct interest **B1**

Answer: £5.40

Question 2

D) 24.00 - correct cost **B1**

Answer: £24.00

Question 3

Sets up two correct equations or a correct systematic method, e.g. x + y = 21 and 20x + 5y = 315 (oe) **M1**

Correctly eliminates one variable or uses trial and improvement systematically **dM1**

14 twenty-pence coins cao **A1**

7 five-pence coins cao, ft **A1**

Answer: 14 twenty-pence coins and 7 five-pence coins

Question 4

D) 35.84 - correct total **B1**

Answer: £35.84

Question 5

D) 20% - correct percentage reduction **B1**

Answer: 20%

Question 6

B) 14.85 - correct amount per person **B1**

Answer: £14.85

Question 7

B) 2.70 - correct total **B1**

Answer: £2.70

Question 8

D) 180.00 - correct total price **B1**

Answer: £180.00

Question 9

(a) 4% of 600 = 24 (interest per year, oe) **M1**

(a) 600 + 3 x their interest (ft) **M1**

(a) 672 cao **A1**

(a) Answer: £672

(b) 600 x 1.04 = 624 (year 1 balance, oe) **M1**

(b) 624 x 1.04 (year 2 balance, ft) **M1**

(b) 648.96 cao **A1**

(b) Answer: £648.96

Question 10

C) 54.00 - correct final price **B1**

Answer: £54.00

Question 11

235 - 58 = 177 (amount still needed, oe) **M1**

177 / 15 = 11.8, rounds up with reasoning (11 weeks gives 223, not enough) **dM1**

12 cao **A1**

Answer: 12 weeks

Question 12

(a) 540 x 1.20 (oe) **M1**

(a) 648 cao **A1**

(a) Answer: £648

(b) 25% of their (a) (ft) **M1**

(b) their (a) - their discount (ft) **M1**

(b) 486 cao **A1**

(b) Answer: £486

Question 13

E) 27 - correct amount for Kofi **B1**

Answer: £27

Question 14

(a) 0.55 cao **B1**

(a) Answer: £0.55

(b) their (a) / 0.80 (ft) **M1**

(b) 68.8% cao (awrt) **A1**

(b) Answer: 68.8%

(c) 20% of 45 = 9, so 36 kg are sellable (oe) **M1**

(c) 36 x 1.35 = 48.60 and 45 x 0.80 = 36.00 (both values found) **M1**

(c) 12.60 cao **A1**

(c) Answer: £12.60

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