Word Problem Worksheet - Part 1

(Fractions, Percentages, Ratios)

P6 Mathematics CA1 2015

References:
P6 2015 Math CA1 papers of NHPS, RS

Show your workings clearly in the space below it and write your answer in the space provided. Give your answers in the units stated.

1. Belle paid $749 for a handbag below inclusive of 7% GST.
What was the price of the handbag before GST?

Ans: $ _____

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2. $\frac{17}{24}$ m of ribbon is cut into as many shorter pieces. Each of the shorter pieces must Measure $\frac{1}{8}$ m.
What is the length of the remaining piece of the ribbon?
(Give your answer as a fraction in the simplest form.)

Ans: $ _____

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3. A television screen is $\frac{5}{6}$ m long and $\frac{4}{7}$ m wide. What is the area of the screen? Express your answer in the simplest form.

Ans: _____ m^2

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4. A lego box has $\frac{4}{5}$ as many red lego blocks as yellow lego blocks. It has $\frac{2}{7}$ as many black lego blocks as yellow lego blocks. What is the ratio of the number of red lego blocks to the number of yellow lego blocks to the number of black lego blocks.

Ans: _____

For each question, show your workings clearly in the space below and write your answer in the space provided. Remember to include the units wherever possible.

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5. Joe, Alex and Sean shared some stamps in the ratio 3 : 6 : 5. Sean kept $\frac{1}{5}$ of his stamps for himself and gave the rest of his stamps to Joe and Alex in the ratio 3 : 5. As a result, Alex had 96 stamps more than Joe. How many stamps did Joe have in the end?

Ans: _____

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6. Mickey had a number of books for sale. He sold a total of 418 books on Saturday and Sunday. On Monday, he sold $\frac{1}{4}$ of the remainder. He was left with 18% of the books he had at first. How many books did he have at first?

Ans: _____

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7. A cone is placed at every $\frac{2}{5}$ km of a road which measures 10 km. A cone is also placed at the start of the road.

(a) How many cones are there altogether on the road?
(b) Alice decides to walk from the second cone to the fifth cone. What is the total distance that she has covered?

Ans: (a) _____

(b) _____

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8. Anna does not have enough savings now to buy a sweater. If Anna increases her savings by 20%, she would still need another $25. If Anna increases her savings by 45%, she would have $30 more than she needs. How much more money does she need to buy the sweater?

Ans: _____

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9. Hannah and Noah had $920 altogether. Hannah gave 25% of her money to her mother and Noah donated 60% of his money to charity. Then they had an equal amount of money left.

(a) How much money had Noah at first?

(b) How much money did Hannah give to her mother?

Ans: (a) _____

(b) _____

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10. At the school charity fair, some pupils prepared some stationery as prizes for their games stall. Each eraser cost $2, which was $\frac{1}{2}$ of the cost of each notebook. The ratio of the number of the erasers to the number of notebooks was 5 : 3. A total of $1 980 was collected after the charity fair. How many more erasers than notebooks are there?

Ans: _____

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11. Alvin, Theodore and Simon shared a tin of cookies. Alvin took $\frac{2}{3}$ of the tin of cookies and 5 cookies. Theodore took $\frac{2}{3}$ of the remaining tin of cookies and 5 cookies. Simon received only 2 cookies. How many cookies did Alvin have?

Ans: _____

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12. The usual price of a television set is 25% that of a computer. During a sale, Simba bought one television set and one computer at a discount of 30% on each item. He paid a total of $2 590 for them. How much did he save on the computer?

Ans: _____

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13. Charlie had some red and blue marbles in a box. The sum of $\frac{1}{4}$ of the red marbles and $\frac{2}{5}$ of the blue marbles in the box is 64. The sum of $\frac{3}{4}$ of the red marbles and $\frac{3}{5}$ of the blue marbles in the box is 120.

(a) How many marbles are there in the box altogether?

(b) How many blue marbles are there in the box?

Ans: (a) _____

(b) _____

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14. Adam and Lynn had some pencils in a box in the ratio of 9 : 4. Adam sold 12 pencils and Lynn bought another 18 pencils. Then Adam had $\frac{1}{2}$ as many pencils as Lynn. How many pencils were there in the box at first?

Ans: _____

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15. Andy is 4 times as old as his brother. In 7 years' time, the ratio of Andy's age to his brother's age will be 5 : 3. Their father will be 3 times Andy's age in 9 years' time.

(a) What is Andy's age now?

(b) What is the age difference between Andy and his father?

Ans: (a) _____

(b) _____

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16. During the P6 Post-Exam Activities, $\frac{2}{7}$ of the pupils and an additional 12 pupils attended the guitar lessons. $\frac{1}{4}$ of the remaining pupils and an additional 23 pupils attended the photography lessons. The rest of the pupils which were 193 pupils attended the hip-hop lessons.

(a) How many pupils attended the photography lessons?

(b) How many P6 pupils were there?

Ans: (a) _____

(b) _____

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17. Eddie had $\frac{5}{8}$ as many toy soldiers as Ahmad. Ahmad gave away 30% of his toy soldiers while Eddie bought 17 more toy soldiers. In the end, the ratio of the number of toy soldiers Ahmad had to the number of toy soldiers Eddie had was 2 : 3.

(a) How many toy soldiers did Ahmad have at first?

(b) How many toy soldiers did Eddie have in the end?

Ans: (a) _____

(b) _____

Answer Key

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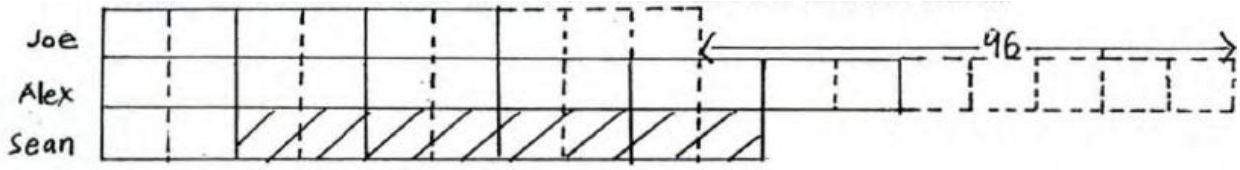
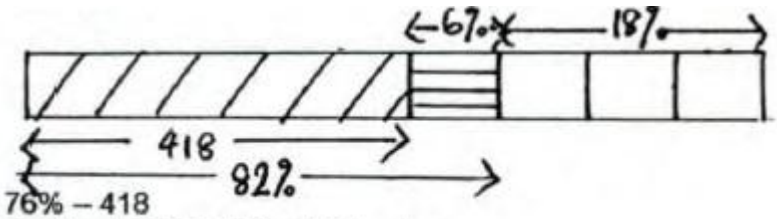
Subject: Primary 6 Maths – Word problems
Paper: CA1 2014

1. $749 \div 107 \times 100 = \$700$
2. $\frac{17}{24} \div \frac{1}{8} = \frac{17}{3} = 5$ pieces

   $\frac{17}{24} - \frac{5}{8} = \frac{1}{12}$ m
3. $\frac{5}{6} \times \frac{4}{7} = \frac{10}{21}$ sq m
4. R : Y : B
   4 : 5
   7 : 2
   28:35: 10
5. 

   8u – 96
   9u – 9/8x96 = 108

6. 

   76% – 418
   100% –100/76x418 = 550 books

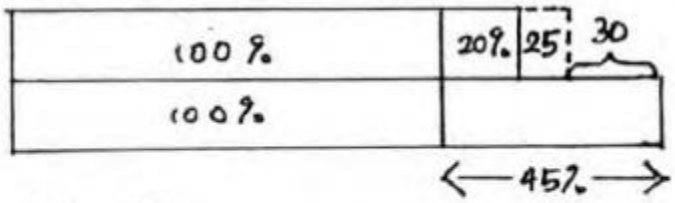
7 a) $10 \div \frac{2}{5} = 25$

   $25 + 1 = 26$

7 b) $5 - 2 = 3$

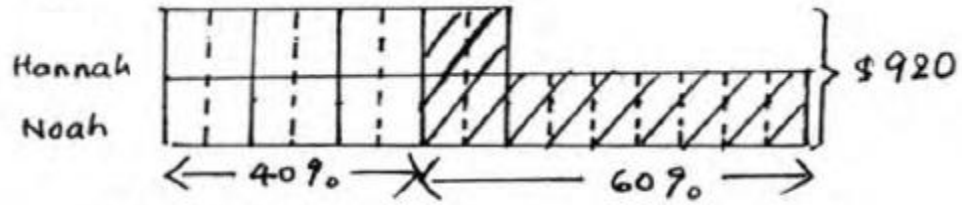
   $3 \times \frac{2}{5} = \frac{6}{5} = 1.2$ km

8.



25% -- $55
20% -- 20/25x$55 = $44
$44+$25 =$69

9.



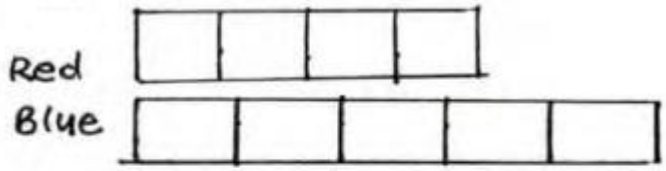
23u -- $920
15u -- 15/23x$920 = $600
2u -- 2/23x$920 = $80

10. 2 x 2 = 4
5 x 2 = 10
3 x 4 = 12
10 + 12 = 22
1980 ÷ 22 = 90
90 x 5 = 450
90 x 3 = 270
450 – 270 = 180

11. Third of Remainder — 2 + 5 = 7
Remainder after Alvin — 7 x 3 = 21
Third of all — 21 + 5 = 26
Two third of all — 26 x 2 = 52
Alvin took — 52 + 5 = 57

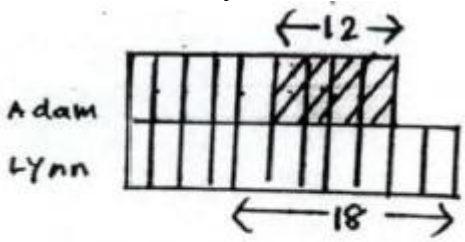
12. 70% — $2590
100% — 100 / 70 x 2590 = $3700
3700 ÷ 5 x 4 = $2960
2590 ÷ 5 x 4 = $2072
$2960 - $2072 = $888 savings

13.



a) 1R+2B = 64
3R+3B = 120
4R+5B = 64+120 = 184
b) 3R+6B =64x3 = 192
3B = 192-120 = 72
5B = 72+3x5 = 120

14. By adding 6u and subtracting 4u which fits 18 : 12 pencil ratio, Adam's pencil becomes half of Lynn's.



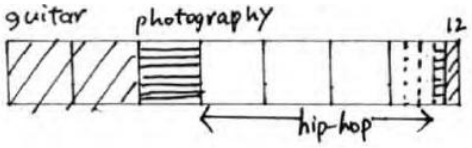
6u -- 18
13u -- 13/6x18 = 39

15.

	Andy : brother	difference
now	4 : 1	3u
in 7 years'	5 : 3	2u
now	8 : 2	6u
in 7 years'	15 : 9	6u

a) Andy is 8 years' old
b) Andy's age in 9 years' = 8+9 = 17
Andy's father in 9 years' = 17x3 = 51
Difference in age between Andy and his father = 51-17 = 34 years old

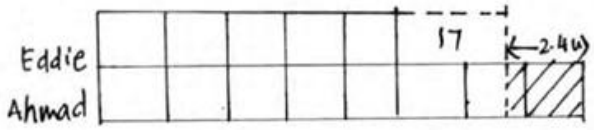
16.



a) 3u+3p = 193+23 = 216
1u+1p = 216÷3 = 72
72+23 = 95 pupils attended the photography lessons

b) Pupils not attending the photography lessons = 95+193 = 288
288+12 = 300
5u -- 300
7u -- 7/5x300 = 420 P6 pupils

17.



a) 30/100x8 = 2.4u
8u-2.4u = 5.6u
2 parts -- 5.6u
3 parts -- 3/2x5.6 = 8.4u
8.4u-5u = 3.4u
3.4u -- 17
8u -- 8÷3.4x17 = 40 toy soldiers at first

b) 5u -- 5÷3.4x17 = 25
25+17 = 42 toy soldiers in the end

References:
(Q1,2,5,6,7,8,9,10,11,12,13,14) = NHPS (Q1,3,6,7,11,12,13,14,15,16,17,18)
(Q3,4,16,17,18) = RS (Q1,5,14,17,18)