Word Problem Worksheet

& Solutions

Difficulty: AA-

Nan Hua

P6 Mathematics CA1 2017

Downloaded from SingaKids.com

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. The average mass of a group of boys was 34.5kg. Dave's mass was 40.5 kg. When Dave joined the group, the new average mass was 36kg. How many boys were there in the group at first?

Ans: _____

---

7. In a school, 40% of the members in volleyball and 60% of the members in golf are boys. The number of members in golf is $\frac{1}{4}$ of the number of members in volleyball. There are 55 more boys in volleyball than in golf. How many members are there in volleyball?

Ans: _____

Downloaded from SingaKids.com

8. Alice threw her birthday party at an indoor playground. Each child was charged $25 and each adult was charged $3. Every child at the party brought 2 adults with them. Alice paid a total of $1085 for the party. How many children attended the party?

Ans: _____

---

9. Mr Ho bought some sweets for this pupils. If he gave each pupil 5 sweets, he would be left with 3 sweets. If he gave each pupil 3 sweets, he would be left with 59 sweets. How many pupils did Mr Ho have?

Ans: _____

Downloaded from SingaKids.com

10. A box contained only red and blue beads. 20% of the beads were red. 200 more red beads were put in and the number of red beads increased to 40%. How many beads were there in the box at the end?

Ans: _____

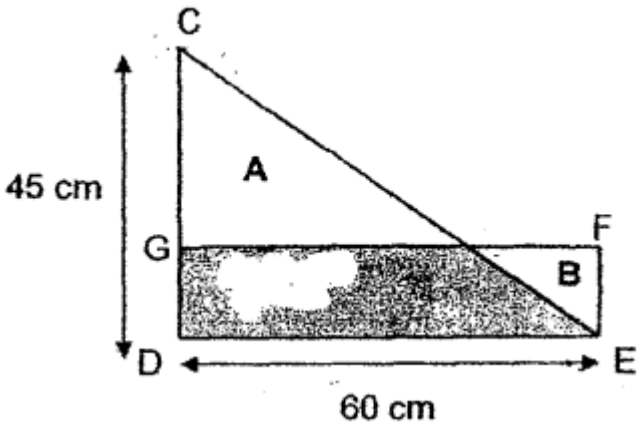
---

11. Kathy read $\frac{1}{3}$ of a book on Monday. She read 144 pages on Tuesday. The number of pages that she read on Tuesday was $\frac{1}{4}$ less than the number of pages that she read on Monday. How many pages were there in the book?

Ans: _____

Downloaded from SingaKids.com

12. The figure shown below, not drawn to scale, consists of a triangle CDE and a rectangle DEFG. The area of the unshaded triangle A is 810 cm^2 greater than the unshaded triangle B. What is the length of EF?



Ans: _____

---

13. Jocelyn spent \$2 less than $\frac{1}{2}$ of her money on a pair of shoes. Then she spent \$3 less $\frac{1}{2}$ of her remaining money on a scarf. She spent the last \$92 on a watch. How much money did Jocelyn have at first?

Ans: _____

Downloaded from SingaKids.com

14. The total cost of a tennis racket and a basketball is $158. The sum of 30% of the price of the tennis racket and 25% of the price of the basketball is $44. What is the price of the tennis racket?

Ans: _____

Downloaded from SingaKids.com

15. Ailing, Bala, Cindy and Dan shared the cost of a present equally. Bala did not enough money and only managed to pay for half his share. Only Ailing and Cindy helped to pay for the rest of Bala's share. The ratio of the amount of money Ailing paid to the amount of money Cindy paid is 3 : 4. The next day, Bala returned $24 to Cindy. How much did the present cost?

Ans: _____

Downloaded from SingaKids.com

16. Mrs Chan bought a blouse and a skirt at a discount. She spent a total of $73.30 on these two items. She spent $1.90 less on the blouse than on the skirt.

(a) How much did she spend on the blouse?
(b) The total discount given for the two items was $24.70. She was given a 30% discount for the blouse. What was the percentage discount given for the skirt?

Ans: (a) _____

(b) _____

Downloaded from SingaKids.com

17. A box contained only 20-cent and 50-cent coins. The ratio of the number of 20-cent coins to the number of 50-cent coins was 3 : 2. Fifteen 20-cent coins were taken and replaced with 50-cent coins of the same value. The ratio of the number of 20-cent coins to the number of 50-cent coins became 19 : 18. How much money was there in the box?

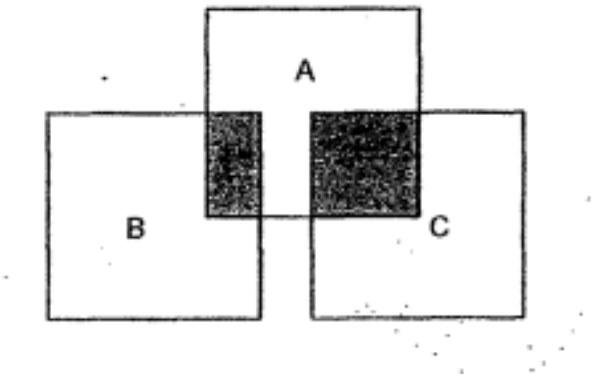
Ans: _____

Downloaded from SingaKids.com

18. The figure below is made up of 3 overlapping identical squares.
$\frac{1}{8}$ of Square B is shaded and $\frac{1}{4}$ of Square C is shaded.

(a) What fraction of Square A is shaded?

(b) Express the unshaded area as a fraction of the total area. (Leave your answer in the simplest form.)



Ans: (a) _____

(b) _____

Downloaded from SingaKids.com

Answer Key

Subject: Primary 6 Maths – Word Problem Solutions
Paper: CA1 2017
Grade: AA- Nan Hua

6. 3
7. 220
8. 35
9. 28
10. 800
11. 576
12. 9 cm
13. $352
14. $90
15. $224
16. a) $35.70 b) 20%
17. $38.40
18. a) $\frac{3}{8}$ b) $\frac{6}{7}$

Downloaded from SingaKids.com

Solutions provided by http://www.sgtestpaper.com/
Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. The average mass of a group of boys was 34.5kg. Dave's mass was 40.5 kg. When Dave joined the group, the new average mass was 36kg. How many boys were there in the group at first?

Difference in average mass = 36 – 34.5 = 1.5 kg
Let u = number of boys at first

Excess mass = 40.5 – 36 = 4.5 kg

1.5 u = 4.5
u = 3
Number of boys at first = 3

Ans: 3

---

7. In a school, 40% of the members in volleyball and 60% of the members in golf are boys. The number of members in golf is $\frac{1}{4}$ of the number of members in volleyball. There are 55 more boys in volleyball than in golf. How many members are there in volleyball?

Let u = number of members in golf

Number of members in volleyball = 4u

Number of boys in golf = 0.6u

Number of boys in volleyball = 0.4 x 4u = 1.6u

Excess number of boys in volleyball = 1.6u – 0.6u = u = 55

Members in volleyball = 4u = 4 x 55 = 220

Ans: 220

Downloaded from SingaKids.com

8. Alice threw her birthday party at an indoor playground. Each child was charged $25 and each adult was charged $3. Every child at the party brought 2 adults with them. Alice paid a total of $1085 for the party. How many children attended the party?

Fee for each child plus 2 adults = 25 + 3 + 3 = $31

Number of groups = 1085 ÷ 31 = 35

Number of children attending the party = 35

Ans: 35

---

9. Mr Ho bought some sweets for this pupils. If he gave each pupil 5 sweets, he would be left with 3 sweets. If he gave each pupil 3 sweets, he would be left with 59 sweets. How many pupils did Mr Ho have?

Excess number of sweets = 59 – 3 = 56

Difference in number of sweets per pupil = 5 – 3 = 2

Number of pupils = 56 ÷ 2 = 28

Ans: _____

Downloaded from SingaKids.com

10. A box contained only red and blue beads. 20% of the beads were red. 200 more red beads were put in and the number of red beads increased to 40%. How many beads were there in the box at the end?

At first, the ratio of red vs blue bead → 1 : 4 → 3u : 12u

At the end, the ratio of red vs blue beads → 40 : 60 → 2 : 3 → 8u : 12u

8u – 3u = 5u → 200

u = 40

20u = 20 x 40 = 800 beads

Ans: _____

---

11. Kathy read $\frac{1}{3}$ of a book on Monday. She read 144 pages on Tuesday. The number of pages that she read on Tuesday was $\frac{1}{4}$ less than the number of pages that she read on Monday. How many pages were there in the book?

Let u = $\frac{1}{4}$ of Monday pages

Tuesday pages = 3u = 144

u = 144 ÷ 3 = 48

Monday pages = 4u = 4 x 48 = 192

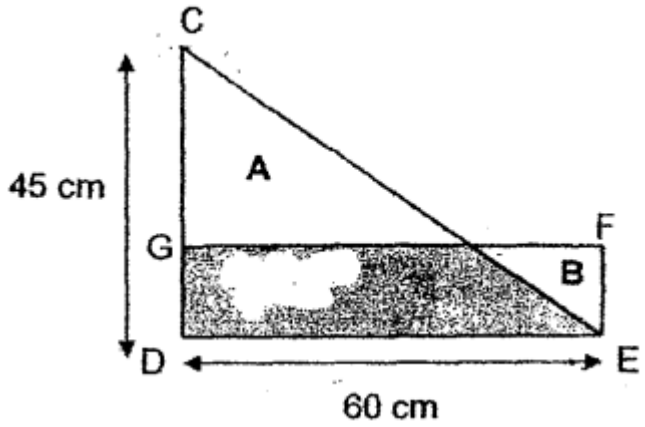
Let p = $\frac{1}{3}$ = 192

Total pages in book = 3p = 192 x 3 = 576

Ans: _____

Downloaded from SingaKids.com

12. The figure shown below, not drawn to scale, consists of a triangle CDE and a rectangle DEFG. The area of the unshaded triangle A is 810 cm^2 greater than the unshaded triangle B. What is the length of EF?



△A = △CDE – □ DEFG + △B

△A - △B = $\frac{1}{2}$ x 45 x 60 - □DEFG = 810

□DEFG = 1350 – 810 = 540

EF = 540 ÷ 60 = 9 cm

Ans: _____

---

13. Jocelyn spent \$2 less than $\frac{1}{2}$ of her money on a pair of shoes. Then she spent \$3 less $\frac{1}{2}$ of her remaining money on a scarf. She spent the last \$92 on a watch. How much money did Jocelyn have at first?

Half of remaining money = 92 - 3 = 89
Remaining money = 89 x 2 = 178
Half of original money = 178 – 2 = 176
Original money at first = 176 x 2 = \$352

Ans: \$352

Downloaded from SingaKids.com

14. The total cost of a tennis racket and a basketball is $158. The sum of 30% of the price of the tennis racket and 25% of the price of the basketball is $44. What is the price of the tennis racket?

Let t = tennis racket cost
Let b = basketball cost

$t + b = 158$

$\frac{10}{10} t + \frac{4}{4} b = 158$ (1)

$\frac{3}{10} t + \frac{1}{4} b = 44$ (2)

$\frac{12}{10} t + \frac{4}{4} b = 176$ (3) = (2) x 4

$\frac{2}{10} t = 176 – 158 = 18$ (4) = (3) – (1)

$t = 18 \times 10 \div 2 = \$90$

Ans: $90

Downloaded from SingaKids.com

15. Ailing, Bala, Cindy and Dan shared the cost of a present equally. Bala did not enough money and only managed to pay for half his share. Only Ailing and Cindy helped to pay for the rest of Bala's share. The ratio of the amount of money Ailing paid to the amount of money Cindy paid is 3 : 4. The next day, Bala returned $24 to Cindy. How much did the present cost?

Ratio of A : B : C : D → u : u : u : u

Ratio of A+C : B : D → 2.5u : 0.5u : u (1)

→ 35u : 7u : 14u (2) = (1) x 14

A : C → 3 : 4 → 15 : 20 x 5

A : C : B : D → 15u : 20u : 7u: 14u

Cindy paid amount minus average amount = 20u – 14u = 6u

6u → $24

u = $4

Total = 15u + 20u + 7u + 14u = 56u = 56 x 4 = $224

Ans: $224

Downloaded from SingaKids.com

16. Mrs Chan bought a blouse and a skirt at a discount. She spent a total of $73.30 on these two items. She spent $1.90 less on the blouse than on the skirt.

(a) How much did she spend on the blouse?
(b) The total discount given for the two items was $24.70. She was given a 30% discount for the blouse. What was the percentage discount given for the skirt?

(a) Excess amount = $1.90

Cost of discounted blouse = (73.30 – 1.90) ÷ 2 = $35.70

(b) Discount for blouse = 30 ÷ 70 x 35.70 = $15.30

Discount for skirt = 24.70 – 15.30 = $9.40

Cost of discounted shirt = 35.70 + 1.90 = $37.60

Cost of shirt before discount = 37.60 + 9.40 = $47

Discount of shirt = 9.40 ÷ 47 = 20%

Ans: (a) $35.70

(b) 20%

Downloaded from SingaKids.com

17. A box contained only 20-cent and 50-cent coins. The ratio of the number of 20-cent coins to the number of 50-cent coins was 3 : 2. Fifteen 20-cent coins were taken and replaced with 50-cent coins of the same value. The ratio of the number of 20-cent coins to the number of 50-cent coins became 19 : 18. How much money was there in the box?

At first, ratio of number of 20-cent vs number of 50-cent coins → 3 : 2 → 72u:48u

Fifteen 20-cents coins = 15 x 0.2 = $3 = Six 50-cent coins

72u – 15u : 48u + 6u → 57u : 54u

At end, of number of 20-cent vs number of 50-cent coins → 19 : 18

→ 57u : 54u

Value of 20-cents coins = 72 x 0.20 = $14.40

Value of 50-cents coins = 48 x 0.5 = $24.00

Total money in box = 14.40 + 24 = $38.40

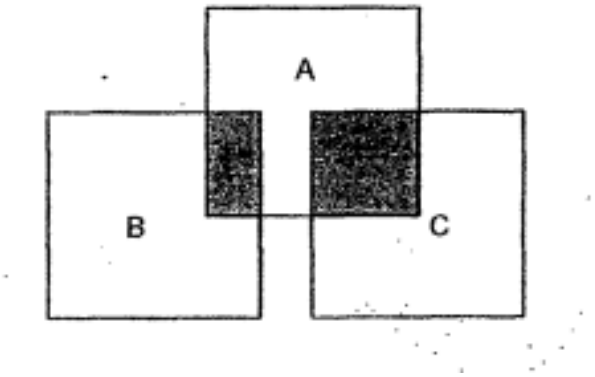
Ans: $38.40

Downloaded from SingaKids.com

18. The figure below is made up of 3 overlapping identical squares.
$\frac{1}{8}$ of Square B is shaded and $\frac{1}{4}$ of Square C is shaded.

(a) What fraction of Square A is shaded?

(b) Express the unshaded area as a fraction of the total area. (Leave your answer in the simplest form.)



(a) Fraction of Square A shaded = $\frac{1}{8} + \frac{1}{4} = \frac{3}{8}$

(b) Unshaded area $= (\frac{5}{8} + \frac{7}{8} + \frac{6}{8}) = \frac{18}{8}$ of square

Total area = $3 - \frac{1}{8} - \frac{1}{4} = \frac{21}{8}$ of square

Fraction of unshaded area over totall area = $\frac{18}{8} \div \frac{21}{8} = \frac{6}{7}$

Ans: (a) $\frac{3}{8}$

(b) _____

Downloaded from SingaKids.com