[06-02-14-N1]

Exercise 6.5

answers on p. 428

1. Arthur has 12 more mangoes than Margaret. If they have 28 mangoes altogether, find the number of mangoes Arthur has.

2. Michael and Hassan together have 19 pineapples. If Hassan has 3 pineapples less than Michael, find the number of pineapples Michael has.

3. A number is only one third another. If their difference is 38, find the numbers.

4. A certain number is less than another by $\frac{3}{4}$. If their sum is $9\frac{1}{4}$, find the numbers.

5. One number is greater than half of another by 15. If their sum is 48, find the numbers.

6. A father is four times as old as his son now. If the father was 46 years old two years ago, find the son's age now.

7. A plant grows 3.5 cm per week. It is now 10 cm tall. How many weeks from now will the plant grow to a height of 27.5 cm?

8. The sum of two consecutive even numbers is 54. Find the numbers.

9. If the sum of two consecutive odd numbers is 208, what are the numbers?

10. If m is an odd number, write an expression for the next three consecutive odd numbers. If the sum of these four numbers is 32, find m.

11. The sum of a number, $\frac{3}{8}$ of the number and $\frac{5}{16}$ of the number is $7\frac{1}{2}$. Find the number.

12. I think of a certain number. If I multiply it by 6, add –18 to the product and take away one-third of the sum, I will get –2. What is the number?

13. The sum of two numbers is 2 and their difference is 10. Find the numbers.

14. There are twice as many 50-cent coins as there are one dollar coins in a box. If the total value of the money in the box is 154 dollars, how many 50-cent coins are there in the box?

15. Divide 102 dollars among three boys, A, B and C, so that A gets twice as much as B and C gets $1\frac{1}{2}$ times as much as A. How much does each boy get?

16. Abdul bought three plates and three mugs. If each plate cost him 30 cents more than each mug and if he paid \$2.40 altogether, find the cost of each mug.

17. A father is now four times as old as his son. If the sum of their ages ten years ago was sixty, find their present ages.

18. A man bought 20 books. Some cost 18 dollars each and the others cost 3 dollars each. If he spent 210 dollars in all, how many of the 3-dollar books did he buy?

19. A boy is three years younger than his sister. If his age three years ago was two-thirds her age at that time, what are their present ages?

***20.** John bought a certain number of apples at 30¢ each and he had \$3 left. If he bought the same number of pears at 40¢ each instead of the apples, he would be short of \$1. How many apples did he buy?

***21.** There were 50 more pupils who took the mathematics test than the geography test. $\frac{1}{5}$ of those who took the mathematics test were girls and $\frac{1}{4}$ of those who took the geography test were girls. If the number of girls who took the mathematics test was 6 more than the number of girls who took the geography test, find the number of pupils who took the mathematics test.

***22.** Meatballs and fishballs were sold in packets, each packet containing the same number of meatballs or fishballs. Meatballs were priced at 4 pieces for \$1 and fishballs at 6 pieces for \$1. A man had just enough money to buy 2 packets of meatballs and 1 packet of fishballs. He needed one more dollar if he were to buy 3 packets of meatballs instead. Find the number of meatballs or fishballs in a packet.

***23.** A man has just enough money to buy 20 mangoes or 30 oranges If he wants to buy equal numbers of mangoes and oranges, how many of each type can he buy with the money?

(h) 1, 2, 3, . . ., 12
(i) 1, 2, 3, . . ., 7
(j) 1, 2, 3, 4, 5
(k) 1, 2, 3, . . ., 8
(l) 1, 2, 3, 4, 5

5. (a) True (b) True (c) True
(d) True (e) False (f) True

6. (a) ±3 (b) ±2 (c) No solution
(d) ±5 (e) ±2 (f) No solution

Exercise 6.2 *(p. 158)*

1. (a) Subtract x from both sides.
Subtract 3 from both sides.
(b) Add $3x$ to both sides.
Add 4 to both sides.
(c) Divide both sides by 3.
Add 5 to both sides.
(d) Divide both sides by 3.
Add 5 to both sides.

2. (a) 13 (b) 13 (c) 1
(d) 1 (e) 3 (f) 12
(g) 1 (h) 9 (i) $-\frac{5}{3} = -1\frac{2}{3}$
(j) 56 (k) $-22\frac{1}{2}$ (l) $2\frac{1}{2}$
(m) $3\frac{3}{4}$ (n) 2 (o) 5
(p) 7

3. (a) $1\frac{3}{10}$ (b) $\frac{3}{8}$ (c) $2\frac{1}{3}$
(d) 27 (e) 3 (f) 2
(g) $1\frac{3}{10}$ (h) $2\frac{2}{3}$ (i) 26
(j) $1\frac{7}{10}$ (k) –26 (l) 30
(m) $4\frac{2}{5}$ (n) –2 (o) $-\frac{9}{5}$
(p) $-\frac{4}{3}$

4. (a) ±2 (b) ±3 (c) ±4
(d) ±5 (e) ±6 (f) –1, 3

Exercise 6.3 *(p. 161)*

1. 12 2. 1 3. 0
4. 1 5. 56 6. $-22\frac{1}{2}$
7. 2 8. 5 9. 7
10. –10 11. –70 12. $17\frac{1}{7}$
13. $-1\frac{2}{5}$ 14. $12\frac{2}{5}$ 15. $-\frac{67}{38}$
16. $-\frac{4}{11}$ 17. 1.048 18. 0.681
19. 0.325 20. 3.768 21. 0.778
22. 1.25 23. 4.67 24. –1.47
25. $-\frac{1}{7}$ 26. $\frac{19}{7} = 2\frac{5}{7}$ 27. $-\frac{10}{7}$
28. $\frac{4}{19}$ 29. $\frac{3}{4}$ 30. 4

Exercise 6.4 *(p. 163)*

1. $\frac{1}{2}$ 2. 288 3. 950
4. 25 5. 3 6. ±6
7. $4\frac{1}{8}$ 8. $111\frac{23}{32}$ 9. $16\frac{2}{3}$
10. $-3\frac{4}{7}$ 11. $\frac{3}{16}$ 12. 33
13. ±3 14. $13\frac{1}{3}$

Exercise 6.5 *(p. 165)*

1. 20 2. 11
3. 19, 57 4. $4\frac{1}{4}$, 5
5. 22, 26 6. 12 yrs old
7. 5 weeks 8. 26, 28
9. 103, 105 10. $m + 2$, $m + 4$, $m + 6$; 5
11. $4\frac{4}{9}$ 12. $2\frac{1}{2}$
13. –4, 6 14. 154
15. A: \$34, B: \$17, C: \$51 16. 25 cents
17. Father: 64 yrs old, Son: 16 yrs old
18. 10
19. Boy: 9 yrs old, Sister: 12 yrs old
20. 40 21. 130
22. 12 23. 12

Chapter 7

Exercise 7.1 *(p. 174)*

1. (a) 25 (b) 20 (c) 7.5
(d) 20