1.8 Practice - Number and Geometry Problems

Solve.

1. When five is added to three more than a certain number, the result is 19. What is the number?

2. If five is subtracted from three times a certain number, the result is 10. What is the number?

3. When 18 is subtracted from six times a certain number, the result is -42. What is the number?

4. A certain number added twice to itself equals 96. What is the number?

5. A number plus itself, plus twice itself, plus 4 times itself, is equal to -104. What is the number?

6. Sixty more than nine times a number is the same as two less than ten times the number. What is the number?

7. Eleven less than seven times a number is five more than six times the number. Find the number.

8. Fourteen less than eight times a number is three more than four times the number. What is the number?

9. The sum of three consecutive integers is 108. What are the integers?

10. The sum of three consecutive integers is -126. What are the integers?

11. Find three consecutive integers such that the sum of the first, twice the second, and three times the third is -76.

12. The sum of two consecutive even integers is 106. What are the integers?

13. The sum of three consecutive odd integers is 189. What are the integers?

14. The sum of three consecutive odd integers is 255. What are the integers?

15. Find three consecutive odd integers such that the sum of the first, two times the second, and three times the third is 70.

16. The second angle of a triangle is the same size as the first angle. The third angle is 12 degrees larger than the first angle. How large are the angles?

17. Two angles of a triangle are the same size. The third angle is 12 degrees smaller than the first angle. Find the measure the angles.

18. Two angles of a triangle are the same size. The third angle is 3 times as large as the first. How large are the angles?

19. The third angle of a triangle is the same size as the first. The second angle is 4 times the third. Find the measure of the angles.

20. The second angle of a triangle is 3 times as large as the first angle. The third angle is 30 degrees more than the first angle. Find the measure of the angles.

21. The second angle of a triangle is twice as large as the first. The measure of the third angle is 20 degrees greater than the first. How large are the angles?

22. The second angle of a triangle is three times as large as the first. The measure of the third angle is 40 degrees greater than that of the first angle. How large are the three angles?

23. The second angle of a triangle is five times as large as the first. The measure of the third angle is 12 degrees greater than that of the first angle. How large are the angles?

24. The second angle of a triangle is three times the first, and the third is 12 degrees less than twice the first. Find the measures of the angles.

25. The second angle of a triangle is four times the first and the third is 5 degrees more than twice the first. Find the measures of the angles.

26. The perimeter of a rectangle is 150 cm. The length is 15 cm greater than the width. Find the dimensions.

27. The perimeter of a rectangle is 304 cm. The length is 40 cm longer than the width. Find the length and width.

28. The perimeter of a rectangle is 152 meters. The width is 22 meters less than the length. Find the length and width.

29. The perimeter of a rectangle is 280 meters. The width is 26 meters less than the length. Find the length and width.

30. The perimeter of a college basketball court is 96 meters and the length is 14 meters more than the width. What are the dimensions?

31. A mountain cabin on 1 acre of land costs $30,000. If the land cost 4 times as much as the cabin, what was the cost of each?

32. A horse and a saddle cost $5000. If the horse cost 4 times as much as the saddle, what was the cost of each?

33. A bicycle and a bicycle helmet cost $240. How much did each cost, if the bicycle cost 5 times as much as the helmet?

34. Of 240 stamps that Harry and his sister collected, Harry collected 3 times as many as his sisters. How many did each collect?

35. If Mr. Brown and his son together had $220, and Mr. Brown had 10 times as much as his son, how much money had each?

36. In a room containing 45 students there were twice as many girls as boys. How many of each were there?

37. Aaron had 7 times as many sheep as Beth, and both together had 608. How many sheep had each?

38. A man bought a cow and a calf for $990, paying 8 times as much for the cow as for the calf. What was the cost of each?

39. Jamal and Moshe began a business with a capital of $7500. If Jamal furnished half as much capital as Moshe, how much did each furnish?

40. A lab technician cuts a 12 inch piece of tubing into two pieces in such a way that one piece is 2 times longer than the other.

41. A 6 ft board is cut into two pieces, one twice as long as the other. How long are the pieces?

42. An eight ft board is cut into two pieces. One piece is 2 ft longer than the other. How long are the pieces?

43. An electrician cuts a 30 ft piece of wire into two pieces. One piece is 2 ft longer than the other. How long are the pieces?

44. The total cost for tuition plus room and board at State University is $2,584. Tuition costs $704 more than room and board. What is the tuition fee?

45. The cost of a private pilot course is $1,275. The flight portion costs $625 more than the groung school portion. What is the cost of each?

Answer Set - Number and Geometry

1) 11

2) 5

3) -4

4) 32

5) -13

6) 62

7) 16

8) $\frac{17}{4}$

9) 35, 36, 37

10) $-43, -42, -41$

11) $-14, -13, -12$

12) 52, 54

13) 61, 63, 65

14) 83, 85, 87

15) 9, 11, 13

16) 56, 56, 68

17) 64, 64, 52

18) 36, 36, 108

19) 30, 120, 30

20) 30, 90, 60

21) 40, 80, 60

22) 28, 84, 68

23) 24, 120, 36

24) 32, 96, 52

25) 25, 100, 55

26) 45, 30

27) 96, 56

28) 27, 49

29) 57, 83

30) 17, 31

31) 6000, 24000

32) 1000, 4000

33) 40, 200

34) 60, 180

35) 20, 200

36) 30, 15

37) 76, 532

38) 110, 880

39) 2500, 5000

40) 4, 8

41) 2, 4

42) 3, 5

43) 14, 16

44) 1644

45) 325, 950