

Unit 2 – Integers

Grade 7 Mathematics Exam Review

1. Find the product $(+5) \times (-9)$.
2. Find the product of -4 and -7.
3. Find the product of -10 and +3.
4. Replace \square with an integer to make the equation true.
 $\square \times (-5) = -30$
5. Replace \square with an integer to make the equation true.
 $(+30) \times \square = -150$
6. Let one white tile represent +1 and one black tile represent -1.
What sum does this set of tiles model? Write the addition equation.



7. Let one white tile represent +1 and one black tile represent -1.
What sum does this set of tiles model? Write the addition equation.



8. Let one white tile represent +1 and one black tile represent -1.
What sum is modelled by 6 white tiles and 2 black tiles?
9. Let one white tile represent +1 and one black tile represent -1.
What sum is modelled by 19 positive tiles and 16 negative tiles?
10. Use coloured tiles to find the sum.
 $(+3) + (+2)$
11. Use coloured tiles to find the sum.
 $(-9) + (-3)$
12. Add.
 $(-8) + (+12)$
13. Add.
 $(+10) + (-11)$
14. Add.
 $(+5) + (-8)$

15. Use coloured tiles to find the sum.
 $(+5) + (+4) + (-4)$

16. Find this product. $(+5)(-3)$

17. Find this product. $(-6)(+5)$

18. Find this product. $(-15) \times (-8)$

19. Find this product. $(-14) \times (+11)$

20. A deep-sea diver must descend and ascend in short steps to equalize pressure on his body.
Suppose a diver started at 27 m below the water surface and rose in 5 steps of 5 m each.
Use an integer to describe his new position in relation to the water surface.

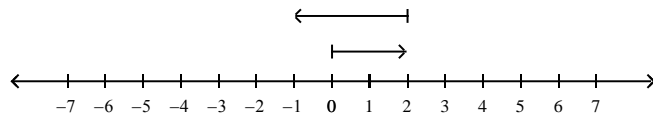
21. Which of these products are negative?

- i) $(+4)(+8)$
- ii) $(+4)(-9)$
- iii) $(-5)(+9)$
- iv) $(-8)(-5)$

22. Which of these products are positive?

- i) $(+3)(-8)(+9)$
- ii) $(-4)(+9)(-8)$
- iii) $(-8)(-9)(+4)$
- iv) $(-3)(-9)(-4)$

23. Write an addition equation modelled by the number line.



24. Use a number line to add: $(+6) + (-3)$. Write the addition equation.

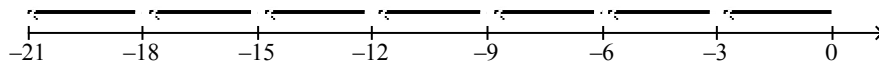
25. Use a number line to add.
 $(+14) + (+11)$

26. Use a number line to add.
 $(+14) + (+12)$

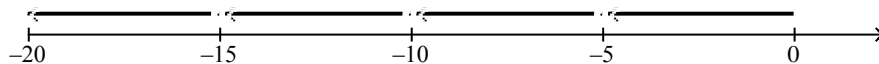
27. Use a number line to add.
 $(-3) + (-19)$

28. Use a number line to add.
 $(-8) + (-9)$
29. Use a number line to add.
 $(-2) + (+10)$
30. The temperature is 15°C and drops 8°C .
 Write an addition equation to calculate the final temperature. What is the final temperature?
31. Sam owns a small business. He made a profit of \$7 on Saturday and lost \$10 on Sunday.
 Find the total profit or loss for the weekend.
32. In a golf tournament, Joey got a score of +11 and Melissa got a score of -5 .
 What was their combined score?
33. During the day the temperature was 3°C . At night, the temperature dropped 9°C .
 What was the temperature at night?
34. Atoms contain charged particles called protons and electrons.
 Each proton has a charge of +1, and each electron has a charge of -1.
 A sulfur ion has 16 protons and 18 electrons.
 Find the overall charge.
35. Use $<$, $>$, or $=$ to complete this sentence.
 $(+1) + (-14)$ \square $(+7) + (-4)$

36. Write the integer division modelled by this number line.



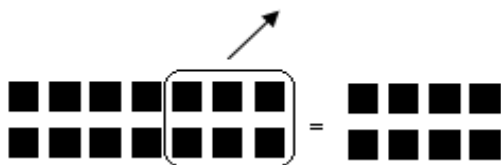
37. Write the integer division modelled by this number line.



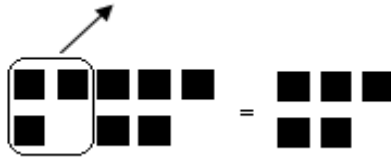
38. Find the quotient $(+8) \div (-1)$.
39. Find the quotient $(-18) \div (+6)$.
40. Find the quotient $(-21) \div (-3)$.
41. Which quotients are positive?
- $(+21) \div (-7)$
 - $(+84) \div (+6)$
 - $(-32) \div (+4)$
 - $(-12) \div (-6)$

42. Start at 0 on the number line. Move 2 units left each time until you reach -10.
How many moves did you make?
43. Inside a cooling tower, the temperature fell 3°C each hour for a total change of -27°C .
Find the number of hours it took for the change in temperature.
44. Find this quotient. $(+28) \div (-7)$
45. Find this quotient. $(-70) \div (-7)$
46. Find this quotient. $(+40) \div (-8)$
47. Find this quotient. $(-156) \div (+12)$
48. Divide. $(-60) \div (+2)$
49. Divide. $\frac{+40}{-10}$
50. Divide. $\frac{-66}{+3}$
51. A mountain climber is at an elevation of 3660 m. After 3 h, he is at an elevation of 1953 m.
Use this formula to find the climber's vertical speed.

$$\text{Vertical speed} = \frac{\text{Final elevation} - \text{Initial elevation}}{\text{Time}}$$
52. One day at 3 p.m., the temperature was -6°C in a city in Alaska.
At 10 p.m., the temperature was -20°C .
What was the average change in temperature per hour?
53. Let one white tile represent +1 and one black tile represent -1.
Use tiles to subtract.
 $(+12) - (-5)$
54. Let one white tile represent +1 and one black tile represent -1.
Use tiles to subtract.
 $(+11) - (+7)$
55. Let one black tile represent -1.
Write the subtraction equation modelled by this diagram.



56. Let one black tile represent -1.
Write the subtraction equation modelled by this diagram.



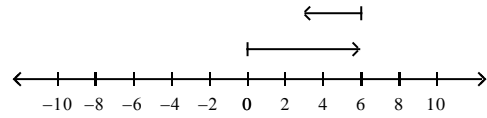
57. Use tiles to subtract.
 $(+5) - (+7)$
58. Use tiles to subtract.
 $(+8) - (+12)$
59. Use tiles to subtract.
 $(-8) - (-7)$
60. Use tiles to subtract.
 $(-3) - (-2)$
61. Use tiles to subtract.
 $(-8) - (+6)$
62. Bryan gets on an elevator at the 35th floor. The elevator goes down 17 floors then up 9 floors.
At what floor does it finally stop?
63. Copy and complete.
 $(+6) - c = -19$
64. Evaluate. $24 + 4(-7)$
65. Evaluate. $18 \div (-3) + 4$
66. Evaluate. $11 \times 11 \div 11$
67. Evaluate. $9 + (-7) - (-4)$
68. Evaluate. $(-6)[(-3) + 9]$
69. Evaluate. $(-4) \times (-15) \div 6$
70. Evaluate. $(-6) \times (-7) - (-7)$
71. Evaluate. $6 \times (2 - 8) + 4$

72. Evaluate. $3 \times 8 - 6 \times (-5)$
73. Evaluate. $-13 + 9 \div (-3) + 9$
74. Use a number line to subtract.
 $(+1) - (-4)$
75. Use a number line to subtract.
 $(-5) - (-9)$
76. Use a number line to subtract.
 $(+3) - (+5)$
77. Use a number line to subtract.
 $(-8) - (+7)$
78. Subtract.
 $(-28) - (+3)$
79. Determine the increase from -49 to -35 .
80. A submarine at sea level dives 9 m and then another 8 m.
Write the final depth of the submarine as an integer.
81. Use a number line to evaluate.
 $(+12) - (+8) - (+9)$
82. Use a number line to evaluate.
 $(+12) + (-8) - (+6)$

Unit 2 - Answer Key

1. -45
2. +28
3. -30
4. +6
5. +5
6. $(-4) + (+3) = -1$
7. $(+6) + (-2) = +4$
8. +4
9. +3
10. +5
11. -12
12. +4
13. -1
14. -3
15. +5
16. -15
17. -30
18. +120
19. -154
20. -2 m
21. ii and iii
22. ii and iii
23. $(+2) + (-3) = -1$

24.



$$(+6) + (-3) = +3$$

25. +25
26. +26
27. -22
28. -17
29. +8
30. $(+15) + (-8) = +7$; 7°C
31. \$3 loss
32. +6
33. -6°C
34. -2
35. $<$
36. $(-21) \div (-3) = +7$
37. $(-20) \div (-5) = +4$
38. -8
39. -3
40. +7
41. ii and iv
42. 5
43. 9 h
44. -4
45. +10
46. -5
47. -13

48. -30

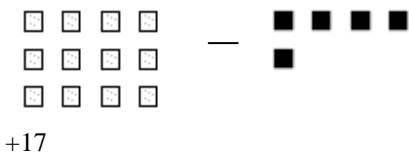
49. -4

50. -22

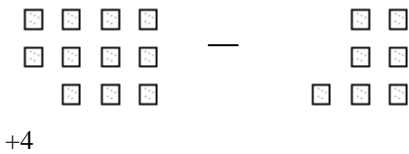
51. -569 m/h

52. -2°C

53.



54.



55. $(-14) - (-6) = -8$

56. $(-8) - (-3) = -5$

57. -2

58. -4

59. -1

60. -1

61. -14

62. 27

63. $+25$

64. -4

65. -2

66. 11

67. 6

68. -36

69. 10

70. 49

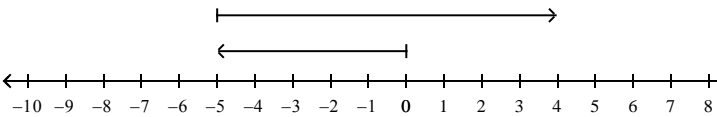
71. -32

72. 54

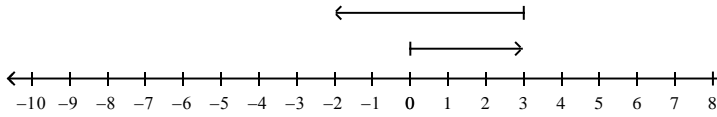
73. -7

74. $+5$

75.



76.



77. -15

78. -31

79. $+14$

80. -17 m

81. -5

82. -2