Integer Review:

1. Place <,>, or = in the space provided to make the statement true:

a) -3 ___ 4 b) –3 ___ -4 c) $(-1)^3$ ___ $(-1)^5$ d) $(-2)^2$ ___ -2^2

2. Determine the missing integer that makes each of the following correct:

a) -3 + _____ = -5 b) -3 - _____ = 5

c) -3 x _____ = 12 d) –3 + (__ ÷4) = -10

3. Twice the product of 2 and –7 is taken away from 50. Find the result.

4. Morgan spent Thanksgiving at her cottage. She measured the temperature each hour for an entire 10-hour period. The temperatures were: 12, 14, 12, 10, 6, 4, -2, -2, -4, 0.

a) Find the average temperature.
b) Find the temperature on the 11^{th} day if the average temperature found in part a) decreases by exactly 1 degree.

5. Jordan predicts that the air temperature outside drops about 5 degrees per 600 metres of altitude. Suppose it is 20°C outside at an altitude of 1500 m,

a) Find the outside temperature at an altitude of 6900 metres.
b) Find the altitude at which the temperature is – 40 degrees.

6. In a game played with one die having results from 1-6 possible, if an even number is rolled first, a person wins $5, but if an odd number is rolled first, the person loses $10. After the first roll, however, the value depends on both the first and second roll. If the second roll MATCHES the first roll (either both even or both odd), the person wins an additional $15, but if it does not, the person loses $5. Determine the total value after 2 rolls if:

a) a person rolls an even and then an odd
b) an odd and then an even
c) two even
d) two odd

Based on your results, is this a fair game? (a fair game is one that, on average has a player neither losing nor winning) Please explain in words.

Answers:

1. a. < b. > c. = d. > 2a. –2 b. –8 c. –4 d. -28

3. 78 4. a. 5 b. –6 5. a. –25 b. 8700 m 6. a. 0 b.-$15 c.$20 d. $5
yes, more than fair, since you win more money than you lose, on average.