Grade 8 Math Unit 2 Test

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1. Evaluate: $(-4) \times (-8)$

A) -32 B) -12 C) 12 D) 32

2. Evaluate: $\frac{+24}{-3}$

A) -8 B) -6 C) 6 D) 8

3. Evaluate: $6 \div (-2 + 4)$

A) -3 B) -1 C) 1 D) 3

4. During one week the daily temperature changes in Curling were: 2, 3, 5, 1, -3, 4, and 2 degrees. What was the ***mean*** daily temperature change in degrees?

A) 1 B) 2 C) 3 D) 4

5. $(-2) + (-2)(-2)(-2)$ is equivalent to which value?

A) -16 B) -10 C) -8 D) 16

6. Ivana Tooney has $64 in her bank account. If she spends $13 every day for a week, what will be the final balance in her bank account at the end of that week? $64 - 13 \times 7 = 64 - 91 = -27$

A) $ -77 B) $ -27 C) $ -1 D) $ 51

7. Which multiplication statement represents $(-4) + (-4) + (-4)$?

A) $(-3) \times (-4)$ B) $(-3) \times (+4)$

C) $(+3) \times (-4)$ D) $(+3) \times (+4)$

8. Jim played cards with his Nan five times; twice he won four dollars, and three times he lost two dollars. Which integer represents Jim's total winnings in dollars? $(2 \times 4) + (3 \times (-2)) = 8 + (-6) = 2$

A) -4 B) -2 C) 2 D) 4

Grade 8 Math Unit 2 Test

9. Calculate: $(-35) \div (-7) - (-28) \div (4)$ $5 - (-7)$

A) -12 B) -2 C) 2 D) 12

10. The ground temperature at an airport is 10°C. The temperature drops 4°C for every 1000 m above the ground. What is the temperature outside an airplane that is 6000 m high?

A) −34°C B) −24°C C) −14°C D) −6°C

$-4 \times 6 = -24$

$(-24) + 10 = -14$

11. Using integers, write a mathematical ~~expression~~ equation describing each of the following. [3 marks]

A) A gain of 8 meters followed by a loss of 3 meters.

$(+8) + (-3) = +5m$

B) For five weeks in a row the total loss on a business deal has been $450.

$(-450) \div 5 = -90$ Lost $90 per week.

C) Eight identical pieces of pizza is shared equally among 3 friends and their coach.

$8 \div 4 = 2$ pieces each.

12. A) Give 4 integers whose ***sum*** is −5 using 2 negative ***and*** 2 positive integers. [1 mark]

$(-3) + (-5) + (+2) + (+1)$ Answers may vary.

B) Give 3 integers such that the ***product*** is -32. [2 marks]

$(2)(4)(-4) = -32$

13. Evaluate. Show steps for full marks when more than one step is required!

A) $(-42) \div 6$ $= -7$ B) $-3(-5)$ $= 15$ C) $7(-3)(0)$ $= 0$ [3 marks]

D) $\frac{-50}{-25} = 2$ E) $(-1)(-8) + (-3)(-4)$ [4 marks]

$= 8 + 12$

$= 20$

F) $4(-7) + 2(-5) + 2$

$(-28) + (-10) + 2$

-36

G) $-3 - 4 \div [(-5) + (+1)]$ [6 marks]

$-3 - 4 \div (-4)$

$-3 + (+1)$

-2

H) $[(-45) \div 5] + \frac{-18}{3}$ [2 marks]

$(-9) + (-6)$

-15

H) $(-6)(-3 - 4) + 6(-9 + 7)$ [4 marks]

$(-6)(-7) + 6(-2)$

$42 + (-12)$

30

14. Do ***any three*** of these problems. Fully explain your answers and show your reasoning! [15 marks]

A) Using a model of your choice explain how to ***either*** multiply ***or*** divide integers.

B) Evaluate $\frac{16+4(3)}{10-4+1} + \frac{(16+4)(3)}{10-(4+1)}$

$\frac{16+12}{6+1} + \frac{(20)(3)}{10-(5)}$

$\frac{28}{7} + \frac{60}{5}$

$4 + 12$

16

C) Jimmy caught three passes during a high school football game. One was for a touchdown and went for 38 yards. Another was for a first down and was for 16 yards. The other was on a screen pass that did not work so well and ended in a loss of 9 yards. What was the ***mean distance*** gained by Jimmy on those three plays?

$\frac{(+38) + (+16) + (-9)}{3} = \frac{45}{3} = 15$

This expression has been evaluated incorrectly. Identify and explain the mistake and then evaluate the expression correctly.