Math 8
Integer Test

Name: **Key**

Date: _____

Part 1: Adding and Subtracting Integers (you may use either a number line or tiles from the front desk if you would like)

1. $15 + (-7) =$ **8**

2. $(-1) + 15 =$ **14**

3. $(-4) + 3 - 10 =$ **-11**

4. $9 - 5 + 2 =$ **6**

5. $(-4) - (-1) =$ **-3**

6. $5 - (-7) =$ **12**

7. $(-2) - 12 =$ **-14**

8. $9 - 7 + 3 =$ **5**

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Part 2: Multiply and Dividing (you may use the integer tiles if you would like)

The four rules are:

Positive x positive = **(+)**

Negative x negative = **(+)**

Simplify the two above rules: **if the signs are the same (+)**

Negative x positive = **(-)**

Positive x negative = **(-)**

Simplify the two above rules: **if the signs are the same (-)**

1. $(12)(-4) =$ **-48**

2. $(-6)(-3) =$ **18**

3. $(-11)(2) =$ **-22**

4. $42 \div (-6) =$ **-7**

5. $(-64) \div (-8) =$ **8**

6. $(-121) \div 11 =$ **-11**

7. $32 \div (-4) =$ **-8**

8. $(-2)(3)(-4) =$ **24**

12

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Part 3: Order of Operations

What is the order you tackle when solving a multi-operation expression? Which ones do you do at the same time?

1. $(5 + -3) + (-2)$

    $2 + {}^-2$

    $\boxed{= 0}$

2. $5 - 2 + (8)(-3)$

    $5 - 2 + {}^-24$

    $\boxed{-21}$

3. $(9 - 2)(13 + 4)$

    $(7)(17)$

    $\boxed{119}$

4. $(8 - 4)(8 - 10)$

    $(4)(-2)$

    $\boxed{-8}$

5. $9 - (-3)(8 + 2)$

    $9 - (-3)(10)$

    $9 - (-30)$

    $9 + 30 \qquad \boxed{= 39}$

6. $1 + 3 - (4)(-2) + 2$

    $1 + 3 - (-8) + 2$

    $4 + 8 + 2$

    $12 + 2$

    $\boxed{14}$

7. $(-8 + 2 - 10) - 16 \div (-4)$

    $(-6 - 10) - 16 \div {}^-4$

    $(-16) - 16 \div {}^-4$

    $-16 + 4 \quad = \boxed{-12}$

8. $2^2 + (-7) - (3)(-6 + 8)$

    $2 \times 2 + {}^-7 - (3)(-6 + 8)$

    $4 + {}^-7 - (3)(2)$

    $4 + {}^-7 - 6$

    $\boxed{-9}$

Part 4: Integer Word Problems: Make sure that you show your work! (diagram, equation, answer)

What is the change in temperature when you leave the base of Big White and it is -2 °C and you arrive at the peak up the mountain and it is -16 °C?
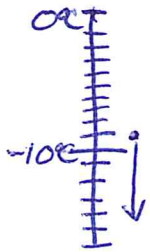
$-16°C.$

$-2°C.$
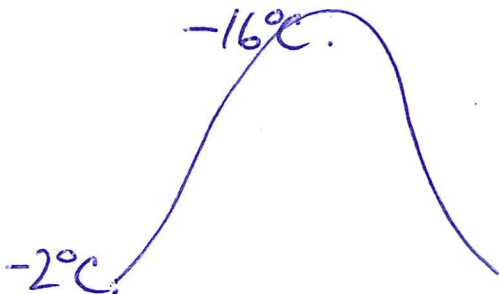
$-16°C - {}^-2°C$

$-16 + 2 = \boxed{-14°C}$

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The low temperature forecasted for Monday is –9 °C. If the low temperature forecasted for Tuesday 5 degrees below this value, what is the low temperature forecasted for Tuesday?

$$-9 \ \overline{\ \ } \ 5 = \boxed{-14 \ ^\circ C}$$

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A diver descended 20 feet into the water from a boat at the surface of a lake. To make sure that she was equalizing her pressure she then rose 12 feet. After she balanced her ear pressure she then descended another 18 feet. At this point, what is her depth in the water?
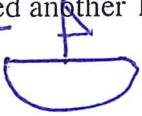
$$-20 + 12 - 18 = \boxed{-26 ft}$$

↓20ft   ↑12ft   ↓18ft

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Your family goes on a road trip to Vancouver. On day one they leave Summerland, which is at an altitude of 450 m above sea level. The Connector (Hwy 97C) climbs to a height of 1728 m above sea level. The Coquihalla (Hwy 5) gets to a height of 1240 m above sea level. Where you are aying in Vancouver is at an altitude of 20 m above sea level. What is the road with the highest altitude? What is the difference in altitude from the start of your trip to your destination?

Connector 1728m

$$450m - 20m = \boxed{430m}$$
$$20 - 450m = -430m.$$

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