Math 20-1 Equivalency *Readiness Check*

These questions have been created to help you to assess your readiness for this test. You do not need to report the results of this test.   It is for your use ONLY.

* If you score less than 50% on this test, we recommend you email <u>upgrading@nait.ca</u> for advisement.

DO NOT USE A CALCULATOR FOR THIS TEST.

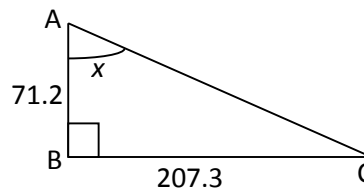1) **Simplify using the order of operations:** $-16(3) + 4^3 \div 2 - (1 - 7)$

2) **Simplify:** $\dfrac{2x^2y^3}{4x^{-2}y}$

3) **Simplify:** $\sqrt[3]{8x^{14}}$

4) **Multiply:** $(x + 3y)(x^2 + 3xy + 9y^2)$

5) **Solve:** $12x^2 - 14x = -4$

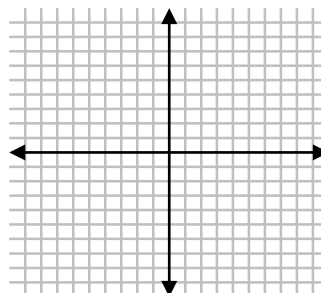6) **Calculate the measure of** $\angle x$ **in degrees.**

7) **The sum of two consecutive even integers is 262. Find the two integers.**

8) **Solve for *x*.** $\dfrac{x}{7} - 4 = \dfrac{-3x}{14}$

9) **Determine the equation of the line passing through (-3, 6) and (4, -1).**
   Express in the form *y* = m*x*+b.

10) **Graph the following:** $y = x^2 - 4x - 5$

Answers:

1) -10

2) $\dfrac{x^4 y^2}{2}$

3) $2x^4 \sqrt[3]{x^2}$

4) $x^3 + 6x^2 y + 18xy^2 + 27y^3$

5) $x = \dfrac{2}{3},\ x = \dfrac{1}{2}$

6) $71.0°$

7) $x = 130,\ (x + 2) = 132$

8) $x = \dfrac{56}{5}$

9) $y = -x + 3$

10)