Name: _____

N.Q.A.1: Conversions 2a

1 On a certain day in Toronto, Canada, the temperature was 15° Celsius (C). Using the formula $F = \frac{9}{5}C + 32$, Peter converts this temperature to degrees Fahrenheit (F). Which temperature represents 15°C in degrees Fahrenheit?
1) –9
2) 35
3) 59
4) 85

2 The formula $C = \frac{5}{9}(F - 32)$ can be used to find the Celsius temperature (C) for a given Fahrenheit temperature (F). What Celsius temperature is equal to a Fahrenheit temperature of 77°?
1) 8°
2) 25°
3) 45°
4) 171°

3 If the temperature in Buffalo is 23° Fahrenheit, what is the temperature in degrees Celsius? [Use the formula $C = \frac{5}{9}(F - 32)$.]
1) –5
2) 5
3) –45
4) 45

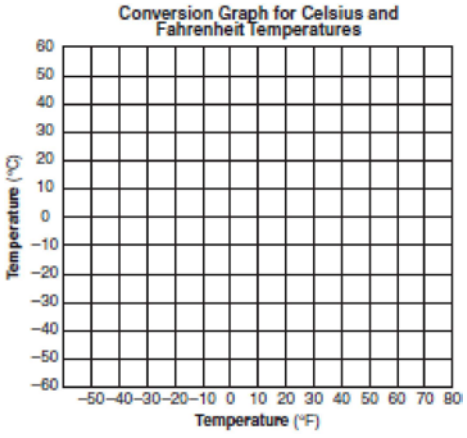
4 The formula for converting temperatures in degrees Celsius to degrees Fahrenheit is $F = \frac{9}{5}C + 32$. If the temperature is 20°C, what is the temperature in degrees Fahrenheit?
1) 68
2) 43.1
3) 33.8
4) 4

5 Faith wants to use the formula $C(f) = \frac{5}{9}(f - 32)$ to convert degrees Fahrenheit, f, to degrees Celsius, $C(f)$. If Faith calculated $C(68)$, what would her result be?
1) 20° Celsius
2) 20° Fahrenheit
3) 154° Celsius
4) 154° Fahrenheit

6 The formula for changing Celsius (C) temperature to Fahrenheit (F) temperature is $F = \frac{9}{5}C + 32$. Calculate, to the *nearest degree*, the Fahrenheit temperature when the Celsius temperature is –8.

7 The formula $C = \frac{5}{9}(F - 32)$ is used to convert Fahrenheit temperature, F, to Celsius temperature, C. What temperature, in degrees Fahrenheit, is equivalent to a temperature of 10° Celsius?

8 Connor wants to compare Celsius and Fahrenheit temperatures by drawing a conversion graph. He knows that –40°C = –40°F and that 20°C = 68°F. On the accompanying grid, construct the conversion graph and, using the graph, determine the Celsius equivalent of 25°F.



N.Q.A.1: Conversions 2a
Answer Section

1 ANS: 3

$F = \frac{9}{5}C + 32 = \frac{9}{5}(15) + 32 = 59$

REF: 010901ia

2 ANS: 2

$C = \frac{5}{9}(F - 32) = \frac{5}{9}(77 - 32) = 25$

REF: 089908a

3 ANS: 1

$C = \frac{5}{9}(F - 32) = \frac{5}{9}(23 - 32) = -5$

REF: 060407a

4 ANS: 1

$F = \frac{9}{5}C + 32 = \frac{9}{5}(20) + 32 = 68$

REF: 080804a

5 ANS: 1

$C(68) = \frac{5}{9}(68 - 32) = 20$

REF: 011710ai

6 ANS:

18. $F = \frac{9}{5}C + 32 = \frac{9}{5}(-8) + 32 = 17.6 \approx 18$

REF: 060021a

7 ANS:

$C = \frac{5}{9}(F - 32)$

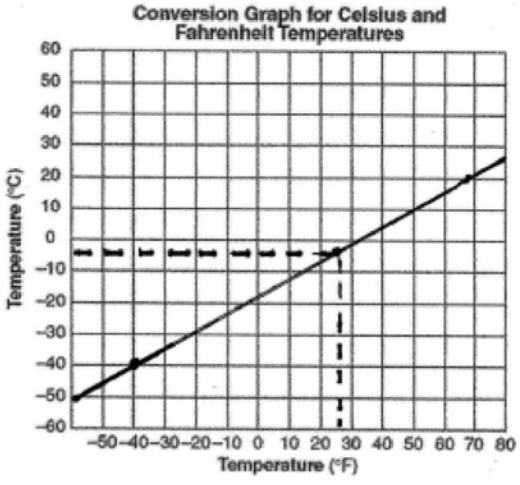
50. $10 = \frac{5}{9}(F - 32)$

$18 = F - 32$

$F = 50$

REF: 010734a

8 ANS:



; –6°C to – 2°C

REF: 060128a