Fahrenheit and Celsius: a linear function worksheet – Grade 8

Grade 8 · Mixed level · Mastery worksheet · 25 questions · **Version X93582**

Name: _____ Date: _____ Score: ___ / 25

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A Fill in the answer

Work out each answer and write it on the line.

1. Use F = 9/5 C + 32. What is 45°C in °F?

   Answer: _____

2. It is -20°C in a freezer. Use F = 9/5 C + 32. What is that in °F?

   Answer: _____

3. Use F = 9/5 C + 32. A thermometer reads 140°F. What is the temperature in °C?

   Answer: _____ °C

4. It is 20°C in a warm classroom. Use F = 9/5 C + 32. What is that in °F?

   Answer: _____

5. Use F = 9/5 C + 32. What is 35°C in °F?

   Answer: _____

B Choose the answer

Circle the letter of the right answer.

6. In F = 9/5 C + 32, the temperature rises by 25°C. By how many degrees Fahrenheit does it rise?

   A. 45 **B.** 43 **C.** 47 **D.** 25

7. Zara's recipe says to bake at 356°F, but the oven shows °C. Use F = 9/5 C + 32. What should Zara set it to in °C?

   A. 198 **B.** 90 **C.** 180 **D.** 189

8. A graph of °F against °C goes through (15, 59) and (35, 95). What is the slope of the line? Write it as a decimal.

   A. 3.6 **B.** 1.8 **C.** 2.8 **D.** 3.8

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9. It is 0°C in a glass of ice water. Use F = 9/5 C + 32. What is that in °F?

   A. 14°F **B.** 42°F **C.** 32°F **D.** 0°F

C Choose all that apply

There is more than one right answer. Circle every one.

10. Circle every problem whose answer is greater than 32.

    A. Overnight the temperature fell 63°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall?

    B. Use F = 9/5 C + 32. What is 80°C in °F?

    C. Use F = 9/5 C + 32. A thermometer reads 41°F. What is the temperature in °C?

    D. In F = 9/5 C + 32, the temperature rises by 45°C. By how many degrees Fahrenheit does it rise?

    E. Overnight the temperature fell 54°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall?

11. Circle every problem whose answer is greater than 81.

    A. Use F = 9/5 C + 32. What is 25°C in °F?

    B. Use F = 9/5 C + 32. A thermometer reads 185°F. What is the temperature in °C?

    C. In F = 9/5 C + 32, the temperature rises by 60°C. By how many degrees Fahrenheit does it rise?

    D. Overnight the temperature fell 81°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall?

    E. Use F = 9/5 C + 32. What is 100°C in °F?

D True or false

Check each answer. Tick True or False for every row.

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12. Is each answer correct? Tick True or False.

	True	False
It is 150°C in an oven set low. Use F = 9/5 C + 32. What is that in °F? Answer: 312°F	☐	☐
It is 35°C in a hot summer afternoon. Use F = 9/5 C + 32. What is that in °F? Answer: 95°F	☐	☐
It is 100°C in a pot of boiling water. Use F = 9/5 C + 32. What is that in °F? Answer: 222°F	☐	☐

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13. Is each answer correct? Tick True or False.

	True	False
In F = 9/5 C + 32, what does the number 32 mean? Answer: The boiling point of water in °F	☐	☐
At what temperature do the Celsius and Fahrenheit scales show the same number? Answer: −40°	☐	☐
It is 10°C in a cool spring morning. Use F = 9/5 C + 32. What is that in °F? Answer: 50°F	☐	☐

E Spot the mistake

Decide if the answer is right, then explain how you know.

14. Maya's recipe says to bake at 446°F, but the oven shows °C. Use F = 9/5 C + 32. What should Maya set it to in °C? Noah says the answer is 110. Is Noah right? Explain how you know.

A. Yes **B.** No

BECAUSE...

15. A graph of °F against °C goes through (30, 86) and (50, 122). What is the slope of the line? Write it as a decimal. Sofia says the answer is 0.8. Is Sofia right? Explain how you know.

A. Yes **B.** No

BECAUSE...

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F Match

Solve each problem, then tick the letter of its answer.

16. Answers to choose from:

A 180 **B** 20 **C** 190 **D** 1.8

	A	B	C	D
A graph of °F against °C goes through (10, 50) and (25, 77). What is the slope of the line? Write it as a decimal.	☐	☐	☐	☐
Kai's recipe says to bake at 374°F, but the oven shows °C. Use F = 9/5 C + 32. What should Kai set it to in °C?	☐	☐	☐	☐
Use F = 9/5 C + 32. A thermometer reads 68°F. What is the temperature in °C?	☐	☐	☐	☐
Isla's recipe says to bake at 356°F, but the oven shows °C. Use F = 9/5 C + 32. What should Isla set it to in °C?	☐	☐	☐	☐

17. Answers to choose from:

A 149 **B** 1.8 **C** 40 **D** 99

	A	B	C	D
A graph of °F against °C goes through (0, 32) and (20, 68). What is the slope of the line? Write it as a decimal.	☐	☐	☐	☐
In F = 9/5 C + 32, the temperature rises by 55°C. By how many degrees Fahrenheit does it rise?	☐	☐	☐	☐
Overnight the temperature fell 72°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall?	☐	☐	☐	☐
Use F = 9/5 C + 32. What is 65°C in °F?	☐	☐	☐	☐

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G Put in order

Solve, then write the letters in order.

18. Work out each answer. Then write the letters in order, from the smallest answer to the largest.

    P. Sofia's recipe says to bake at 356°F, but the oven shows °C. Use F = 9/5 C + 32. What should Sofia set it to in °C? _____

    Q. Use F = 9/5 C + 32. A thermometer reads 203°F. What is the temperature in °C? _____

    R. A graph of °F against °C goes through (5, 41) and (25, 77). What is the slope of the line? Write it as a decimal. _____

    Order: _____ , _____ , _____

19. Work out each answer. Then write the letters in order, from the smallest answer to the largest.

    P. In F = 9/5 C + 32, the temperature rises by 50°C. By how many degrees Fahrenheit does it rise? _____

    Q. Overnight the temperature fell 36°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall? _____

    R. Use F = 9/5 C + 32. What is 95°C in °F? _____

    Order: _____ , _____ , _____

I Word problems

Show how you worked out each answer in the box.

20. Sofia's recipe says to bake at 320°F, but the oven shows °C. Use F = 9/5 C + 32. What should Sofia set it to in °C?

    SHOW YOUR WORK

    Answer: _____

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21. A graph of °F against °C goes through (15, 59) and (40, 104). What is the slope of the line? Write it as a decimal.

SHOW YOUR WORK

Answer: _____

22. In F = 9/5 C + 32, the temperature rises by 15°C. By how many degrees Fahrenheit does it rise?

SHOW YOUR WORK

Answer: _____ °

23. Overnight the temperature fell 18°F. Use F = 9/5 C + 32. By how many degrees Celsius did it fall?

SHOW YOUR WORK

Answer: _____ °

24. Use F = 9/5 C + 32. A thermometer reads 113°F. What is the temperature in °C?

SHOW YOUR WORK

Answer: _____ °C

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J Challenge

A harder problem. Take your time.

25. Jayden's recipe says to bake at 347°F, but the oven shows °C. Use F = 9/5 C + 32. What should Jayden set it to in °C?

SHOW YOUR WORK

Answer: _____

Score by section: A ___/5 · B ___/4 · C ___/2 · D ___/2 · E ___/2 · F ___/2 · G ___/2 · I ___/5 · J ___/1

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