

Practice WCSU Placement Test – Version A

1. Simplify $\frac{3}{4}(8x - 10)$.

a) $\frac{2}{3}x - 5$

b) $6x + \frac{15}{2}$

c) $6x - 7\frac{1}{2}$

d) $\frac{24}{3}x - \frac{15}{2}$

2. $4(5x - 3) =$

a) $9x - 7$

b) $20x - 3$

c) $20x - 7$

d) $20x - 12$

3. Find the number with the least value

a) -102

b) 3

c) -12

d) 7

4. $\frac{1}{5}x - 7y + \frac{2}{5}x - 14y + 1 =$

a) $\frac{3}{5}x + 7y + 1$

b) $\frac{21}{5}xy + 1$

c) $\frac{3}{5}x - 21y + 1$

d) $-\frac{35}{5}xy + 1$

5. What number multiplied by 7 and then divided by 4 is equal to 14?

a) 56

b) 16

c) 8

d) none of these

6. It is known that making 1 lb. of honey requires 20,000 trips by honey bees to flowers to gather nectar. How pounds of honey would 65,000 trips produce?

a) $4\frac{1}{3}$ lbs.

b) 45,000 lbs.

c) $\frac{4}{13}$ lbs.

d) $\frac{13}{4}$ lbs.

7. Find the value of $-|8|$

a) -8

b) 0

c) 8

d) none of these

8. $\left(-\frac{3}{4}\right)^3 =$

a) $\frac{9}{12}$

b) $\frac{27}{64}$

c) $-\frac{3}{4}$

d) $-\frac{27}{64}$

9. Which answer is the least?

- a) $5 \times 6 - 3$ b) $5 - 6 \times 3$ c) $5 + 6 \times 3$ d) $5 \times 6 + 3$

10. $6 + \frac{-3}{-5} =$

- a) $6\frac{3}{5}$ b) $5\frac{2}{5}$ c) $-\frac{3}{5}$ d) $-6\frac{3}{5}$

11. $\sqrt[3]{8x^5y^3}$

- a) $4x^2y^3\sqrt[3]{x^2}$ b) $2xy\sqrt[3]{x^2}$ c) $2x^2y$ d) $2x^2$

12. 'Twice a number is greater than four' can be written equivalently as:

- a) $x = 2$ b) $x > 8$ c) $x > 2$ d) $x > 4$

13. $16xy - 6y =$

- a) $10x$ b) $(4x - 2y)(4y + 3y)$ c) $2y(8x - 3)$ d) $6y(10x - 1)$

14. Factor completely: $x^2 - y^2$

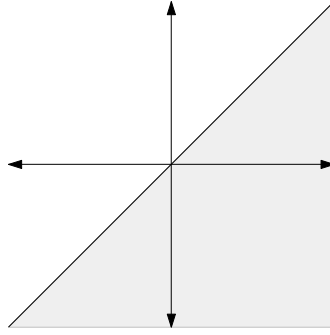
- a) $(x - y)(x + y)$ b) $(xy)(x - y)$ c) $(x + y) - 2(x - y)$ d) $(x - y)^2$

15. If x is greater than 4 then $x + 2$ must be

- a) 6 b) between -6 and 6 c) greater than 2 d) greater than 6

16. $x^2 - x - 12 = 0$, then x could equal which of the following?

- a) 3 b) -3 c) 12 d) -4



17. Which of the following inequalities defines the region above?

- a) $x \leq 0$ and $y \leq 0$ b) $x \geq y$ c) $x \leq y$ d) $x \geq 0$ and $y \geq 0$

18. The inequality $x - 4 \leq 12$ is equivalent to

- a) $x \leq 16$ b) $x \geq 16$ c) $x \leq -16$ d) $-16 \leq x \leq 16$

19. The inequality $2x - 7 \geq x + 9$ is equivalent to

- a) $x \geq 16$ b) $-7 \leq x \leq 9$ c) $x \geq 16$ d) $x \leq -16$

20. Factor the following trinomial: $2x^2 + 3x - 5$

- a) $(x - 1)(2x + 5)$ b) $(x + 1)(2x + 5)$ c) $(x - 1)(2x - 5)$ d) $(x + 1)(2x - 5)$

21. Which is a factor of $6x^2 + 11x - 10$?

- a) $(3x + 2)$ b) $(3x - 2)$ c) $(3x + 5)$ d) $(3x - 5)$

22. If $x = -3$ then $x^2 - 6x + 7 =$

- a) 16 b) -20 c) 20 d) 34

23. $\frac{c^5}{c^8} =$

- a) c^3 b) $\frac{1}{c^3}$ c) c^{13} d) $\frac{1}{c^{13}}$

24. $\left(\frac{x^5}{y^8}\right)^3 =$

a) $\frac{x^8}{y^{11}}$

b) x^8y^{11}

c) $\frac{x^{15}}{y^{24}}$

d) $\frac{1}{xy^9}$

25. If $\frac{4x-8}{5} = 16$, then $x =$

a) 24

b) 22

c) 16

d) 18

26. $(r-3p)^2 =$

a) $r^2 - 9p^2$

b) $r^2 - 6rp + 9p^2$

c) $r^2 + 6rp + 9p^2$

d) $r^2 + 9p^2$

27. $\left(\frac{-8w}{3}\right) \cdot \left(\frac{7}{w^9}\right) =$

a) $\frac{-56w^8}{3}$

b) $\frac{-8w^{10}}{21}$

c) $\frac{-56}{3w^8}$

d) $\frac{56w}{3w^9}$

28. $4x - a \quad bx + 3 =$

a) $4bx^2 + (12 - ab)x - 3a$

b) $4bx^2 + (ab - 12)x - 3a$

c) $4bx^2 + (4 - a)x - 3a$

d) $4bx^2 + (12 + ab)x - 3a$

29. $\frac{5}{3x} + \frac{2}{x} =$

a) $\frac{7}{4x}$

b) $\frac{10}{3x^2}$

c) $\frac{11}{3x}$

d) $\frac{7}{3x}$

30. $\frac{9}{x-7} - \frac{1}{x-3} =$

a) -2

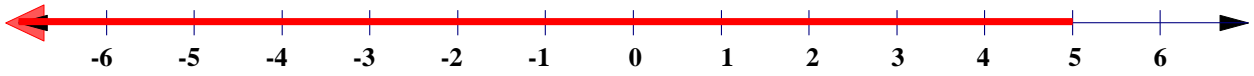
b) $\frac{8x-20}{(x-7)(x-3)}$

c) $\frac{8}{2x-10}$

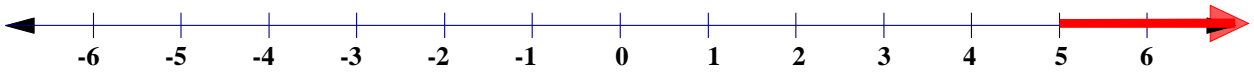
d) $\frac{8}{(x-3)(x-7)}$

31. Which of the following is the graph of $2x + 3 \leq -7$?

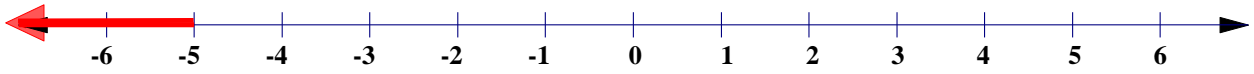
a)



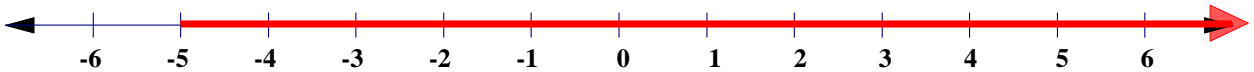
b)



c)



d)



32. In the solution of the system of equations below, what is the value of m ?

$$\begin{cases} 5m - 3n = 9 \\ 3m + n = 11 \end{cases}$$

a) $\frac{5}{3}$

b) 2

c) $\frac{3}{11}$

d) 3

33. $\frac{x^3}{x^2 + 2x} =$

a) $\frac{x}{1 + 2x}$

b) $\frac{x^2}{x^2 + 2}$

c) $\frac{x^2}{x + 2}$

d) $\frac{x}{2x}$

34. Jack drove y miles in 20 minutes. If he continues at the same rate how many miles can he drive in the next 15 minutes?

a) 35 miles

b) $\frac{4y}{3}$ miles

c) 5 miles

d) $\frac{3y}{4}$ miles

35. $\frac{5}{\frac{3}{x} + \frac{2}{y}} =$

a) $5x + 5y$

b) $\frac{5xy}{3y+2x}$

c) $\frac{5xy}{6}$

d) $\frac{3y+2x}{5xy}$