


Orientation Exercises 7

1. Solve for x : $2x - 3 > 11$
 $2x > 14$
 $x > 7$
 A. $x > 4$ D. $x > -7$
 B. $x > 7$ E. $x < -4$
 C. $x < -7$
2. Solve for x : $7 < 2x + 11$
 $-4 < 2x$
 $-2 < x$
 A. $x < -2$ D. $x < 2$
 B. $x > -2$ E. None of the above
 C. $x > 2$
3.  is the graph of:
 $-2 -1 0 1 2 3 4$
 A. $|x + 1| < 3$ D. $|x - 1| > 3$
~~B. $|x + 3| < 1$~~ ~~E. $|x - 3| > 1$~~
 C. $|x - 1| < 3$
4. Solve for x : $|2x - 4| = 10$
 A. $\{-3, -7\}$ D. $\{3, 7\}$
 B. $\{-3, 7\}$ E. \emptyset
 C. $\{3, -7\}$
 $2x - 4 = 10$ or $2x - 4 = -10$
 $2x = 14$ $2x = -6$
 $x = 7$ $x = -3$
5. Any quantity, not zero, raised to the power zero equals:
 A. -1 D. its reciprocal
 B. 0 E. the quantity itself
 C. 1
6. The fraction $\frac{1}{100,000,000}$ can be written as:
 87654321
 A. 10^7 D. 10^{-7}
 B. 10^8 E. None of the above
 C. 10^{-8}
7. Simplify $8y^{3a+2b+2c} \div 2y^{a-2b+c}$.
 A. $4y^{4a+3c}$
 B. $4y^{-2a-4b-c}$
 C. $4y^{2a+4b+c}$
 D. $4y^{2a-4b+c}$
 E. None of the above
 $4y^{3a+2b+2c-a+2b-c}$
 $4y^{2a+4b+c}$
8. With $x \neq 0$, the expression $5x^0(5x)^0$ is equivalent to:
 A. 0 D. 25 5 · 1 · 1
 B. 1 E. $5x$
 C. 5
9. Find the slope of the line with the equation $2x + 3y = -12$.
 A. -4 D. $\frac{2}{3}$
 B. -2 E. 3
 C. $-\frac{2}{3}$
 $3y = -2x - 12$
 $y = -\frac{2}{3}x - 4$
10. Find the slope of the linear equation $x - 2y = -6$.
 A. -3 D. 1 $-2y = -x - 6$
 B. -1 E. 3 $y = \frac{1}{2}x + 3$
 C. $\frac{1}{2}$
11. If the slope of one leg of a right triangle is $\frac{1}{2}$, then the slope of the other leg must be:
 A. -2 D. $\frac{3}{2}$
 B. $-\frac{1}{2}$ E. 2
 C. $\frac{1}{2}$ ⊥ m
12. If the slope of one leg of a right triangle is 3, then the slope of the other leg must be:
 A. -3 D. $\frac{2}{3}$
 B. $-\frac{1}{3}$ E. 3
 C. $\frac{1}{3}$ ⊥ m

13. $(6 \times 10^8)(4 \times 10^{-3}) = 24 \cdot 10^5$

- A. 2.4×10^5
- B. 2.4×10^6**
- C. 2.4×10^7
- D. 2.4×10^4
- E. 2.4×10^{11}

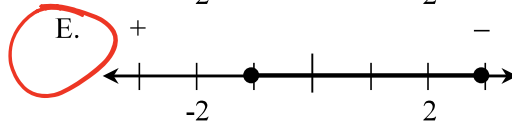
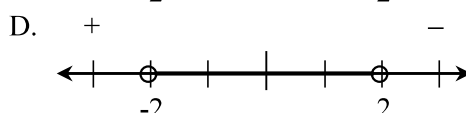
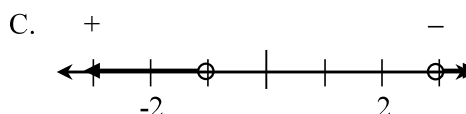
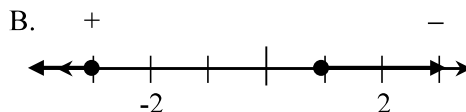
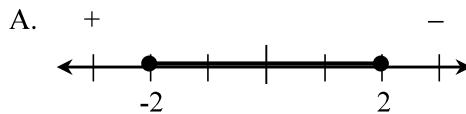
$= 2.4 \cdot 10 \cdot 10^5$
 $= 2.4 \cdot 10^6$

14. Solve for the variable: $3x - 2 = 14 - 5x$

- A. -4
- B. 8
- C. 2**
- D. 0
- E. -6

$8x - 2 = 14$
 $8x = 16$
 $x = 2$

15. Which graph below represents the solution to $|x - 1| \leq 2$?



$x - 1 \leq 2$ or $x - 1 \geq -2$

$x \leq 3$ or $x \geq -1$