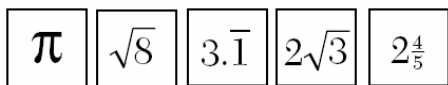


Section 1-4: The Real Numbers

Ordering Real Numbers

1. 060433a, P.I. 7.N.3

Kyoko's mathematics teacher gave her the accompanying cards and asked her to arrange the cards in order from least to greatest. In what order should Kyoko arrange the cards?



2. 010304a, P.I. 7.N.3

In which list are the numbers in order from least to greatest?

[A] $\sqrt{3}, \pi, 3.2, 3\frac{1}{3}$ [B] $\sqrt{3}, 3.2, \pi, 3\frac{1}{3}$

[C] $3.2, \pi, 3\frac{1}{3}, \sqrt{3}$ [D] $3.2, 3\frac{1}{3}, \sqrt{3}, \pi$

3. 080516a, P.I. 7.N.3

Which numbers are arranged from smallest to largest?

[A] $\sqrt{9.1}, 3.14, \pi, \frac{22}{7}$

[B] $\sqrt{9.1}, \pi, 3.14, \frac{22}{7}$

[C] $\sqrt{9.1}, 3.14, \frac{22}{7}, \pi$

[D] $3.14, \frac{22}{7}, \pi, \sqrt{9.1}$

4. 060609a, P.I. 7.N.3

Which list is in order from smallest value to largest value?

[A] $3.1, \pi, \frac{22}{7}, \sqrt{10}$ [B] $3.1, \frac{22}{7}, \pi, \sqrt{10}$

[C] $\pi, \frac{22}{7}, 3.1, \sqrt{10}$ [D] $\sqrt{10}, \frac{22}{7}, \pi, 3.1$

5. 010816a, P.I. 7.N.3

In which group are the numbers arranged in order from smallest value to largest value?

[A] $3.14, \sqrt{9.86}, \pi, \frac{22}{7}$

[B] $\sqrt{9.86}, \frac{22}{7}, 3.14, \pi$

[C] $\pi, 3.14, \sqrt{9.86}, \frac{22}{7}$

[D] $\frac{22}{7}, 3.14, \pi, \sqrt{9.86}$

6. 080621a, P.I. 7.N.3

Which list shows the numbers

$|-0.12|, \sqrt{\frac{1}{82}}, \frac{1}{8}, \frac{1}{9}$ in order from smallest to largest?

[A] $\sqrt{\frac{1}{82}}, \frac{1}{9}, |-0.12|, \frac{1}{8}$

[B] $\sqrt{\frac{1}{82}}, |-0.12|, \frac{1}{9}, \frac{1}{8}$

[C] $\frac{1}{8}, \frac{1}{9}, \sqrt{\frac{1}{82}}, |-0.12|$

[D] $|-0.12|, \frac{1}{8}, \frac{1}{9}, \sqrt{\frac{1}{82}}$

7. 010526a, P.I. 7.N.3

Which expression has the *smallest* value?

- [A] $-\pi$ [B] -3.02
[C] $-\sqrt{10}$ [D] $-\frac{16}{5}$

8. 010002a, P.I. 7.N.3

Which number has the greatest value?

- [A] $\frac{\pi}{2}$ [B] $1\frac{2}{3}$ [C] 1.5 [D] $\sqrt{2}$

9. 010213a, P.I. 7.N.3

Which inequality is true if $x = \frac{3.04}{1.48}$,
 $y = 1.99 + 0.33$, and $z = (1.3)^3$?

- [A] $y < x < z$ [B] $x < z < y$
[C] $y < z < x$ [D] $x < y < z$

10. 080717a, P.I. 7.N.3

If $t < \sqrt{t}$, t could be

- [A] $\frac{1}{2}$ [B] 0 [C] 4 [D] 2

11. 069917a, P.I. 7.N.3

If $t^2 < t < \sqrt{t}$, then t could be

- [A] 4 [B] $-\frac{1}{4}$ [C] 0 [D] $\frac{1}{4}$

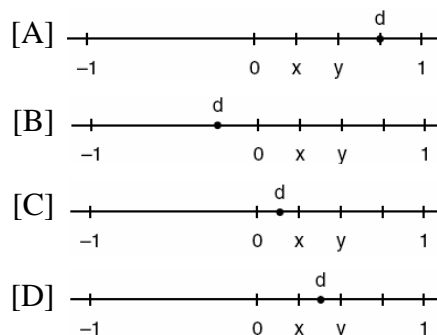
12. 010512a, P.I. 7.N.3

If $x^3 < x < \frac{1}{x}$, then x could be equal to

- [A] $\frac{6}{5}$ [B] 1 [C] $\frac{1}{5}$ [D] 5

13. 010120a, P.I. 7.N.3

Let x and y be numbers such that $0 < x < y < 1$, and let $d = x - y$. Which graph could represent the location of d on the number line?



14. 080006a, P.I. 7.N.3

If $a < b$, $c < d$, and a , b , c , and d are all greater than 0, which expression is always true?

- [A] $\frac{a}{d} > \frac{b}{c}$ [B] $ac < bd$
[C] $a + c > b + d$ [D] $a - c + b - d = 0$

[2] $2\frac{4}{5}$, $\sqrt{8}$, $3.\bar{1}$, π , $2\sqrt{3}$ and appropriate

work is shown, such as converting each value to a decimal equivalent.

[1] All values are correctly converted to decimal equivalents, but the order is not indicated or is indicated incorrectly.

or [1] One or two computational errors are made in finding decimal equivalents, but the appropriate order is indicated.

or [1] Appropriate work is shown, but one conceptual error is made, such as indicating the order from greatest to least.

or [1] $2\frac{4}{5}$, $\sqrt{8}$, $3.\bar{1}$, π , $2\sqrt{3}$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[1] incorrect procedure.

[2] A

[3] A

[4] A

[5] A

[6] A

[7] D

[8] B

[9] B

[10] A

[11] D

[12] C

[13] B

[14] B