

PRINTABLE VERSION

Practice Test 1

Question 1

Multiply and combine like terms in the expression: $\frac{1}{4}(36x + 8) - \frac{1}{9}(63x - 36)$

- a) $-2x + 6$
- b) $-2x - 6$
- c) $2x + 2$
- d) $2x - 2$
- e) $2x + 6$
- f) None of the above

Question 2

Evaluate $6x^2 - 8x$ where $x = -1$.

- a) -2
- b) 14
- c) -14
- d) 6
- e) 2
- f) None of the above

Question 3

Assume x is not zero. Simplify the expression $-5x^0 + 4$

- a) -1
- b) 4
- c) -5

- d) -2
- e) -4
- f) None of the above

Question 4

Find the coordinates of the x -intercept for: $-3x - 8y + 4 = 0$

- a) $\left(0, -\frac{4}{3}\right)$
- b) $\left(\frac{1}{2}, 0\right)$
- c) $\left(\frac{4}{3}, 0\right)$
- d) $\left(-\frac{4}{3}, 0\right)$
- e) $\left(0, \frac{3}{4}\right)$
- f) None of the above

Question 5

Find the coordinates for the y -intercept for: $9x - 3y - 1 = 0$

- a) $\left(\frac{1}{3}, 0\right)$
- b) $(0, 3)$
- c) $\left(0, \frac{1}{3}\right)$
- d) $\left(0, -\frac{1}{3}\right)$
- e) $\left(-\frac{1}{3}, 0\right)$
- f) None of the above

Question 6

Suppose $-4x - 3y = -1$ and $y = -4$. What is the value for x ?

- a) $\frac{9}{4}$
- b) $\frac{13}{4}$
- c) $\frac{17}{4}$
- d) $-\frac{11}{4}$
- e) $\frac{11}{4}$
- f) None of the above

Question 7

Given the points $A(-5, 8)$ and $B(-3, 1)$ in the plane, find the distance between them.

- a) $\sqrt{10}$
- b) $\sqrt{53}$
- c) $\sqrt{145}$
- d) $\sqrt{89}$
- e) $\sqrt{85}$
- f) None of the above

Question 8

Factorize completely the following expression.

$$2x^2 - 4x$$

- a) $4x(x - 4)$
- b) $2x(x - 4)$
- c) $2x(x - 2)$
- d) $4x(x - 2)$

- e) $2(x - 2)$
- f) None of the above

Question 9

Factorize completely the following expression.

$$9x^2 - 14x + 5$$

- a) $(9x - 5)(x + 1)$
- b) $(9x + 5)(x + 1)$
- c) $(9x - 5)(x - 1)$
- d) $(-9x + 5)(x - 1)$
- e) $(9x + 5)(x - 1)$
- f) None of the above

Question 10

Factorize completely the following expression.

$$x^3 - 9x$$

- a) $-x(x - 3)(x + 3)$
- b) $x(x - 3)(x + 3)$
- c) $x(x - 3)^2$
- d) $x(x + 3)^2$
- e) $-x(x - 3)^2$
- f) None of the above

Question 11

Simplify $\frac{x^2 - 5x - 6}{x^2 - 36}$

- a) $\frac{x - 1}{x + 6}$

- b) $\frac{1}{x+6}$
- c) $\frac{x+1}{x+6}$
- d) $x+6$
- e) $\frac{x-6}{x+1}$
- f) None of the above

Question 12

Solve $\frac{x}{6} + \frac{2x}{3} = 1$

- a) $\frac{18}{5}$
- b) $\frac{1}{15}$
- c) $\frac{6}{5}$
- d) $\frac{1}{9}$
- e) $\frac{2}{5}$
- f) None of the above

Question 13

Simplify: $\frac{\left(1 + \frac{1}{7}\right)}{\left(1 - \frac{1}{7}\right)}$

- a) $\frac{3}{4}$
- b) 0
- c) $-\frac{4}{3}$

- d) 1
- e) $\frac{4}{3}$
- f) None of the above

Question 14

Simplify

$$-\left(\frac{x^5}{x^{-10}}\right)^2$$

- a) x^{10}
- b) $-x^4$
- c) $-x^{10}$
- d) $-x^{30}$
- e) x^2
- f) None of the above

Question 15Simplify $x^{-1} + \frac{7}{x}$.

- a) $\frac{x}{7}$
- b) $\frac{8}{7x}$
- c) $6x$
- d) $\frac{-x}{7}$
- e) $\frac{8}{x}$
- f) None of the above

Question 16

Simplify:

$$\frac{\sqrt{18}}{3} + \sqrt{32}$$

- a) $5\sqrt{2}$
- b) $\frac{20\sqrt{2}}{3}$
- c) $\frac{\sqrt{2}}{3} + 8$
- d) $\frac{13\sqrt{2}}{3}$
- e) $\sqrt{2} + 4\sqrt{3}$
- f) None of the above.

Question 17Simplify $6^{-1} - 12^{-1}$.

- a) -18
- b) -6
- c) $-\frac{1}{6}$
- d) 18
- e) $\frac{1}{12}$
- f) None of the above

Question 18

Use interval notation to express the following inequality:

$$x \geq 11$$

- a) $[11, \infty)$

- b) $(-\infty, 11]$
- c) $[11, \infty]$
- d) $[-\infty, 11)$
- e) $(11, \infty]$
- f) None of the above

Question 19

If $d = -5$ and $c = \frac{1}{4}$, evaluate $|4c - d|$

- a) 5
- b) 6
- c) -6
- d) $\frac{37}{4}$
- e) $\frac{9}{4}$
- f) None of the above.

Question 20

Solve for x :

$$\frac{1}{7}(42x - 70) = \frac{7}{6}(60x - 6) + 6$$

- a) $-\frac{13}{64}$
- b) $-\frac{5}{32}$
- c) $-\frac{5}{64}$
- d) $-\frac{11}{64}$

e) $-\frac{9}{64}$

f) None of the above.**Question 21**

Simplify

$$\frac{-6^2 + 2\sqrt{6^2}}{6^2 + 6}$$

a) $-\frac{6}{7}$

b) $-\frac{5}{7}$

c) -1

d) $-\frac{4}{7}$

e) $-\frac{2}{7}$

f) None of the above.**Question 22**Simplify $2^2 - (-2 + 6^2) - 2\sqrt{2^2}$

a) -26

b) -34

c) -42

d) 34

e) -32

f) None of the above.**Question 23**

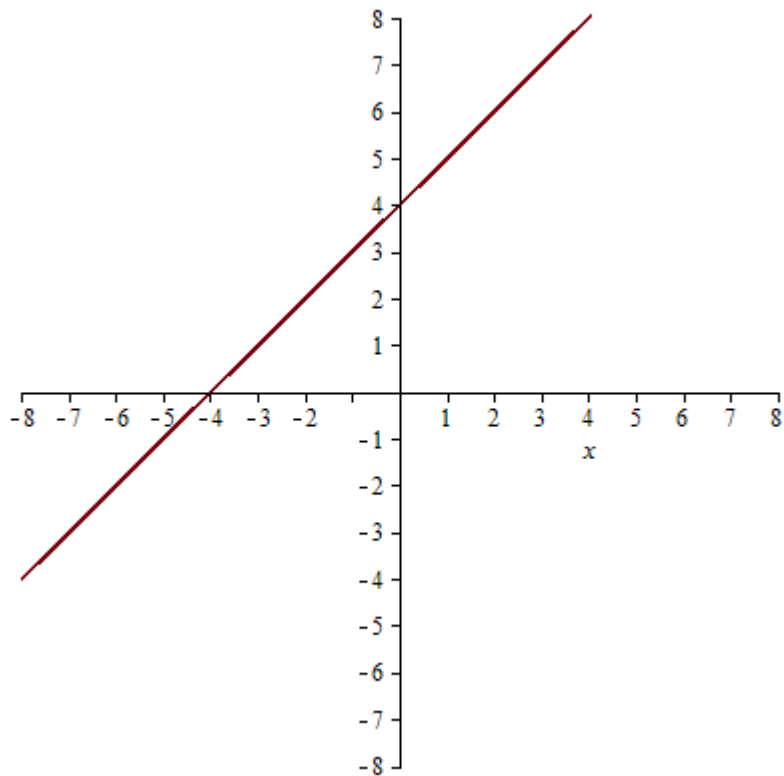
Which of the following(s) is/are true?

- I. $-2^2 = 4$
II. $(-2)^2 = 4$
III. $-(2 - 3)^2 > 0$
IV. $-2 - 10(3 - 6)^2 \leq 0$

- a) IV only
b) II and III only
c) II and IV only
d) I and II only
e) II only
f) None of the above

Question 24

Select the equation which gives the graph shown below.



- a) $y = -4x - 1$
b) $y = 2x + 4$
c) $y = -x + 4$
d) $y = x + 4$

- e) $y = -x - 4$
- f) None of the above.

Question 25

Given the points $A(-9, -2)$ and $B(-2, -5)$ in the plane, find the slope of the line that passes through them.

- a) $-\frac{7}{3}$
- b) $\frac{7}{11}$
- c) $-\frac{3}{7}$
- d) $\frac{7}{3}$
- e) $\frac{3}{7}$
- f) None of the above

Question 26

Find the slope of the line: $10x - 3y + 2 = 0$

- a) $\frac{2}{3}$
- b) $-\frac{3}{10}$
- c) $-\frac{10}{3}$
- d) $\frac{10}{3}$
- e) $\frac{3}{10}$
- f) None of the above.

Question 27

Solve the following equation for x : $3 + \left(\frac{1}{x} - 2\right) = 27$

- a) $\frac{1}{22}$
- b) $\frac{1}{26}$
- c) $\frac{1}{28}$
- d) $\frac{1}{20}$
- e) $\frac{1}{32}$
- f) None of the above

Question 28

Use interval notation to express the following inequality:

$$-18 < x \leq 16$$

- a) $(-18, 16]$
- b) $[-18, 16]$
- c) $(-18, 16)$
- d) $(-\infty, -18) \cup (16, \infty)$
- e) $[-18, 16)$
- f) None of the above

Question 29

A rectangle's length is 6 inches greater than its width. If the perimeter of the rectangle is 28 inches, find the length. (All answers are given in inches.)

- a) 12
- b) 10
- c) 8

- d) 9
- e) 13
- f) None of the above.

Question 30

Simplify

$$(4^{-1} + 4^0) - (9^{-1} + 9^0)$$

- a) -36
- b) $\frac{1}{18}$
- c) $\frac{1}{13}$
- d) $\frac{1}{36}$
- e) $\frac{5}{36}$
- f) None of the above.