Key

# PERT MATH PRACTICE TEST

**DO NOT USE A CALCULATOR WHILE WORKING ON THIS PRACTICE TEST. CALCULATORS ARE ONLY ALLOWED ON VERY FEW PROBLEMS ON THE MATH SECTION OF THE ACTUAL PERT PLACEMENT TEST.**

Evaluate means "plug in"

**1.** MA.912.A.1.1

$-200 \quad +60 \quad -7$

Evaluate: $2xy^2 - 3xy - 7$ if $x = -4$ and $y = 5$.

a. $-147$

b. $-133$

c. $233$

d. $1653$

**2.** MA.912.A.3.1

Solve for $y$: $4-(y-5)-(y+3)=2$

a. $-\frac{25}{2}$

b. $-5$

c. $2$

d. $\frac{19}{5}$

**3.** MA.912.A.1.1

Simplify: $6-4[3(2x+5)-4x]$

a. $4x+30$

b. $8x+30$

c. $8x+42$

d. $-8x-54$

**4.** MA.912.A.3.1

Solve for $x$: $0.2(2x-1)=0.2x+0.08$

a. $1.4$

b. $5$

c. $-2$

d. $0.\overline{3}$

**5.** MA.912.A.3.4

Find all solutions of $5-2x+7 \geq 6$.

a. $x \geq -3$

b. $x \leq 3$

c. $x \geq 3$

d. $x \leq -3$

**6.** MA.912.A.3.1

"get y alone"

Solve the formula $3x+4y=12$ for $y$.

a. $4y=12-3x$

b. $y=\frac{9}{4}$

c. $y=-3x-8$

d. $y=-\frac{3}{4}x+3$

7. MA.912.A.5.4

Solve the equation: $\frac{x-4}{x} = \frac{3}{5}$

a. $x = -5$

b. $x = -6$

c. $x = 10$

d. $x = 2$

8. MA.912.A.1.4

Set up the equation that can be used to solve the following: "Eight less than the square of a number is the same as adding the number and four." *Use x to represent the unknown number.*

a. $8 - x^2 = x + 4$ $x^2 - 8 = x + 4$

b. $x^2 - 8 = x + 4$

c. $2x - 8 = x + 4$

d. $8 - 2x = x + 4$

9. MA.912.A.3.15

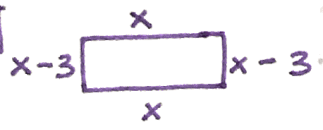
The perimeter of a rectangular swimming pool is 30 meters. The width of the pool is 3 meters less than its length; find the width of this swimming pool.

a. 10 meters $30 = x + x + x - 3 + x - 3$

b. 9 meters $x = 9$

c. 6 meters

d. 3 meters




10. MA.912.A.1.1

Jose books for the semester cost $432.00. How much tax will he pay if the tax rate is 7%?

a. $61.71 $432 \times .07$

b. $28.00

c. $302.40

d. $30.24

11. MA.912.A.4.3

Simplify: $(-8x^4y^3)(-6xy^{-7})$

a. $-48x^4y^{-7}$ $\frac{48x^5}{y^4}$

b. $-48x^4y^{-10}$

c. $\frac{48x^5}{y^4}$

d. $\frac{-48x^4}{y^3}$

12. MA.912.A.1.1

Write the number 37,120,000 using scientific notation. $\rightarrow 7$

a. $3.712 \times 10^7$ $3.712 \cdot 10^7$

b. $3.712 \times 10^{-7}$

c. $37.12 \times 10^{-7}$

d. $37.12 \times 10^6$

13. MA.912.A.4.4

Divide: $\frac{9x^2y - 12xy^2 + 3xy}{3xy}$

a. $6x - 9y$

b. $3x - 4y$

c. $3x - 4y + 1$

d. $3x^2 - 4y + xy$

14. MA.912.A.4.2

Subtract: $(7x^3 - 6x^2 + 2x) - (5x^2 + 8x - 3)$

a. $7x^3 - 11x^2 - 6x + 3$

b. $-3x$

c. $7x^3 - 11x^2 + 10x - 3$

d. $-4x^3 + 10x - 3$

15. MA.912.A.4.2

Multiply: $(2m-5n)(4m+n)$

a. $8m^2-5n^2$

b. $8m^2-18mn-5n^2$

c. $8m^2+5n^2$

d. $8m^2+18mn+5n^2$

16. MA.912.A.4.2

Multiply: $(4n-3)^2$

a. $16n^2+9$

b. $16n^2-24n+9$

c. $16n^2-9$

d. $8n^2-6$

17. MA.912.A.4.2

Find the product for $(2k^2-6k+9)(k+3)$

a. $2k^3-12k^2+9k+27$

b. $2k^3-9k+27$

c. $2k^3-12k^2-27k-27$

d. $2k^3+9k^2-9k-27$

18. MA.912.A.4.3

Factor completely: $4x^2-16$

a. $\frac{(2x-4)}{2}\frac{(2x+4)}{2}\frac{2}{2}$ NOT FACTORED completely

b. $(2x+4)(x-4)$

c. $4(x-2)(x+2)$

d. $(2x-4)(x+4)$

TIP! MULTIPLY EACH CHOICE AND SEE IF IT GETS YOU $4x^2-16$

19. MA.912.A.4.3

Factor completely: $9x^2-6x+4$

a. $(3x-2)^2$

b. $(3x+2)^2$

c. $(3x-2)(3x+2)$

d. $(9x-2)(x-2)$

20. MA.912.A.4.3

Factor completely: $4x^3+12x^2+x+3$

a. $(x+3)(4x^2+1)$

b. $4x^2(x+3)$

c. $4(x-3)(4x^2-1)$

d. $(x+3)(2x+1)^2$

21. MA.912.A.4.3

What is one factor of the trinomial $3x^2-2x-8$?

$(3x+4)(x-2)$

a. $x+2$

b. $3x-2$

c. $x-8$

d. $3x+4$

22. MA.912.A.4.4

What is one solution of $4a^2+20a=0$?

a. $a=-20$

b. $a=-5$

c. $a=4$

d. $a=5$

$a=-5$

$a=0$

23. MA.912.A.2.2

Solve the equation: $x^2 - 10x + 24 = 0$

a. $x = -12$ or $2$ $\quad x = 4$

b. $x = -6$ or $-4$ $\quad x = 6$

c. $x = 6$ or $4$

d. $x = 2$ or $12$

24. MA.912.A.2.4

Simplify: $\dfrac{x^2 - 4x + 4}{x^2 - 5x + 6}$

a. $\dfrac{4x+4}{5x+6}$

b. $\dfrac{x+2}{x+3}$

c. $\dfrac{2}{3}$

d. $\dfrac{x-2}{x-3}$

25. MA.912.A.2.1

Simplify: $\sqrt{27a^8b^7}$

a. $3a^4b^3\sqrt{3b}$

b. $3a^2b^3\sqrt{3a^2b}$

c. $3a^3b^3\sqrt{3}$

d. $-3a^2b^3\sqrt{3a^2b}$

26. MA.912.A.3.3

Solve the formula $A = 10 + ry$ for $y$.

A. $y = \dfrac{A-10}{r}$ $\quad$ B. $y = \dfrac{A+10}{r}$

C. $y = A - 10 - r$ $\quad$ D. $y = A - 10r$

27. MA.912.A.3.4

Solve the system of two equations for $y$:

$$x + y = 8$$
$$2x - y = 10$$

a. $y = -4$

b. $y = 6$ $\quad x = 6$, $y = 2$

c. $y = 4$

d. $y = 2$

28. MA.912.A.3.9


Find the $x$-intercept for the graph:
$4x - 3y = -12$

a. $(4, -3)$

b. $(-3, 0)$

c. $(0, -3)$

d. $(-3, 4)$

29. MA.912.A.3.9 $\quad m = \dfrac{y_2 - y_1}{x_2 - x_1}$

Find the slope, $m$, of the line passing through the points $(-4, -3)$ and $(0, -2)$

a. $m = -\dfrac{2}{3}$

b. $m = 8$

c. $m = -4$

d. $m = \dfrac{1}{4}$

$\dfrac{-2 - (-3)}{0 - (-4)} = \dfrac{1}{4}$

30. MA.912.A.[illegible]

Find the standard form of the equation of a line that passes through the points $(1, 3)$ and $(-2, 5)$

a. $y = 4x - 3$

b. $2x + 3y = 11$

c. $y = -\dfrac{4}{3}x - 1$

d. $2x - 3y = -4$

$\dfrac{5-3}{-2-1} = \dfrac{2}{-3}$

# PERT PRACTICE TEST #2

**DO NOT USE A CALCULATOR WHILE WORKING ON THIS PRACTICE TEST. CALCULATORS ARE ONLY ALLOWED ON VERY FEW PROBLEMS ON THE MATH SECTION OF THE ACTUAL PERT PLACEMENT TEST.**

MA.912.A.1.1

1. Evaluate the expression when x = 4 and y = 3.

$2[(x - 1) + 2xy]$

$2[(3) + 24]$

$2[27]$

$54$

A) 31 C) 42

B) 40 D) 54

MA.912.A.1.2

2. Solve.

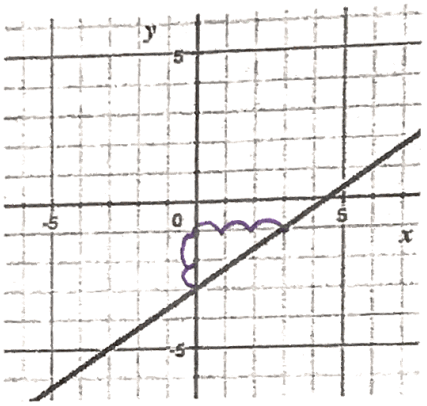
$x^2 - 49 = 0$

A) $\pm 49$ C) $\pm 7$

B) $\pm 12$ D) $\pm 6$

MA.912.A.3.9

3. Write an equation for the line graphed.




$y = mx + b$

$y = \frac{2}{3}x - 3$

A) $y = \frac{2}{3}x - 3$

B) $y = \frac{2}{3}x + 3$

C) $y = \frac{3}{2}x - 3$

D) $y = \frac{3}{2}x + 3$

MA.912.A.3.9

4. Which graph represents the function $y = 4$?

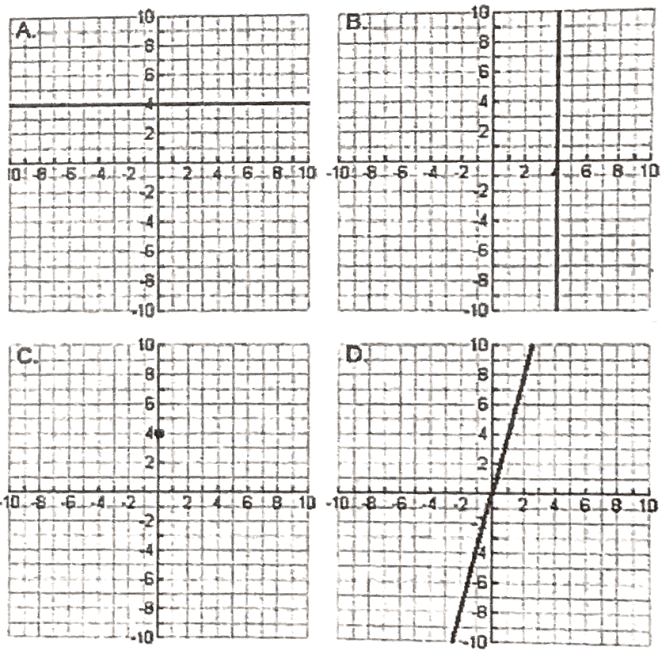
$\longleftrightarrow$

A) A

B) B

C) C

D) D



MA.912.A.3.4

5. Which graph shows the solution to the inequality?

$x - 4 \leq -1$

A.


B.


C.


D.


$x \leq 3$

MA.912.A.4.1

6. Simplify.

$(a^3b^4c^5)(ab^3c)$

A) $a^2bc^5$ C) $a^3bc^7$

B) $a^3bc^5$ D) $a^4b^7c^6$

MA.912.A.4.4

7. Which expression is equivalent to $\frac{9x^2 - 12x + 18}{3x}$?

A) $3x - 4 + \frac{6}{x}$ C) $\frac{3x^2 - 4}{3x}$

B) $3x^2 - 4 + 6x$ D) $3x - 4 + \frac{x}{6}$

MA.912.A.3.1

8. Given $2x - y = 6$, solve for y.

A) $y = 2x + 6$

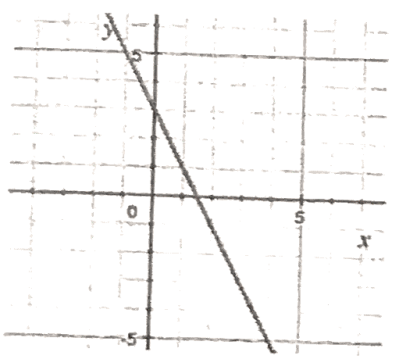
B) $y = 2x - 6$

C) $y = -2x + 6$

D) $y = -2x - 6$

MA.912.A.3.9

9. Identify the equation of the graph shown.




A) $y = 2x + 3$

B) $y = 2x - 3$

C) $y = -2x + 3$

D) $y = -2x - 3$

$y = mx + b$

MA912A-I.1

10. Jimmy loaded three bags of sand into his wheelbarrow. The bags weighed $24\frac{1}{2}$ lbs, $32\frac{3}{5}$ lbs, and $44\frac{1}{8}$ lbs. The total amount of sand in the wheelbarrow is

A) $100\frac{1}{3}$ lbs.

B) $100\frac{9}{40}$ lbs.

C) $101\frac{1}{3}$ lbs.

D) $101\frac{9}{40}$ lbs.

$24\frac{1}{2} + 32\frac{3}{5} + 44\frac{1}{8}$

MA912A-I.6

11. Multiply and simplify.

$(x - 4)^2$

A) $x^2 - 8x - 16$

B) $x^2 - 8x + 16$

C) $x^2 - 16$

D) $x^2 - 8$

MA912A-I.4

12. Simplify the expression: $(x + 3)(2x - 1)$

A) $7x^2 - 3$

B) $2x^2 - 7x - 3$

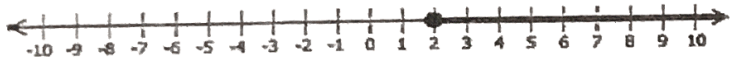
C) $2x^2 - 5x - 3$

D) $2x^2 + 5x - 3$

MA912A-I.5

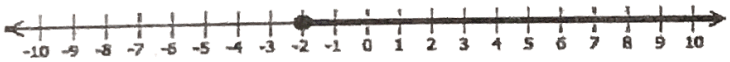
13. Solve $-4x \geq -8$. Graph the solution.

A)

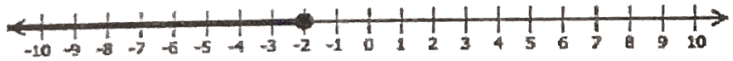



B)


C)




D)




$x \leq 2$

MA912A-I.7

14. Evaluate the expression if a = -2 and b = 5.

$(a^2 - b)^3$

A) -729

B) -27

C) -1

D) 1

$[(-2)^2 - 5]^3$

MA.912.A.4.2

15. Subtract.

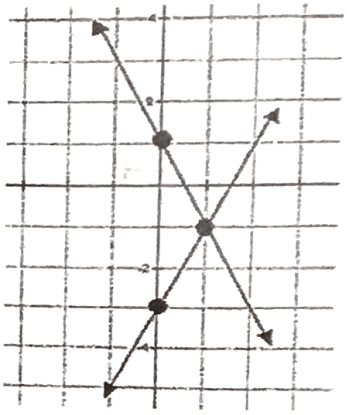
$(3u + 3) - (3u + 3)$

A) 0 C) 6u

B) 6 D) 6u + 6

MA.912.A.5.13

16. Identify the solution for the system of equations graphed here.



A) (1, 1) C) (1, -1)

B) (-1, 1) D) (-1, -1)

MA.912.A.3.3

17. Given $F = \frac{9}{5}C + 32$, the conversion formula for Fahrenheit to Celsius, solve for C.

A) $C = \frac{5}{9}(F - 32)$ C) $C = \frac{9}{5} \cdot \frac{F}{32}$

B) $C = \frac{9}{5}(F - 32)$ D) $C = \frac{5}{9} \cdot \frac{F}{32}$

MA.912.A.1.1

18. Find 65.5÷2.5

A) 0.262 C) 26.2

B) 2.62 D) 262

MA.912.A.1.1

19. There are 5 people in an elevator. Together, they weigh 792.4 pounds. Find their average weight. (Average = $\frac{\text{total}}{\text{number of people}}$)

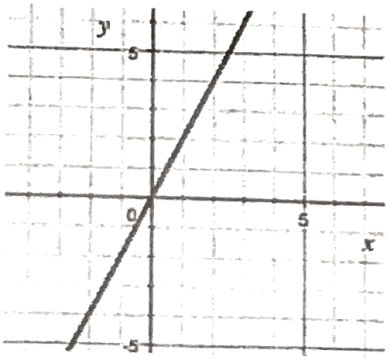
$\frac{792.4}{5}$

A) 158.48 pounds C) 179.65 pounds

B) 162.23 pounds D) 184.57 pounds

MA.912.A.5.2

20. Write an equation for the line graphed.




$y = mx + b$

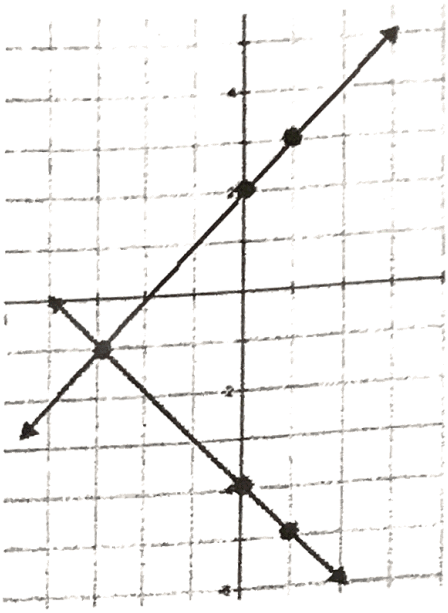
A) y = 2

B) y = 2x

C) y = -2x

D) y = 2x + 1

21. Which of the sets of equations represent the two lines graphed?



A) $y = x + 2$ and $y = x - 4$

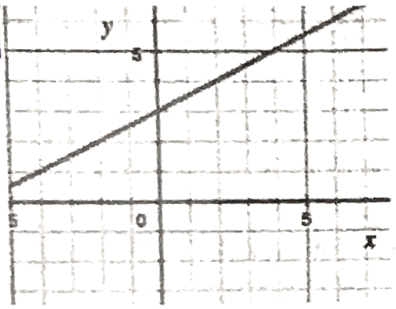
B) $y = x + 2$ and $y = -x - 4$

C) $y = -x + 2$ and $y = x - 4$

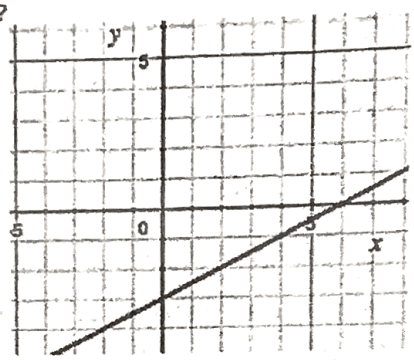
D) $y = -x + 2$ and $y = -x - 4$

22. Which graph represents the equation $y = \frac{1}{2}x + 3$ ?

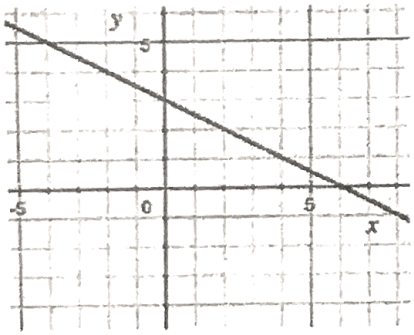
A)



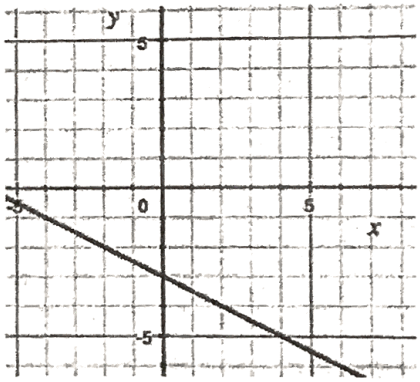

B)



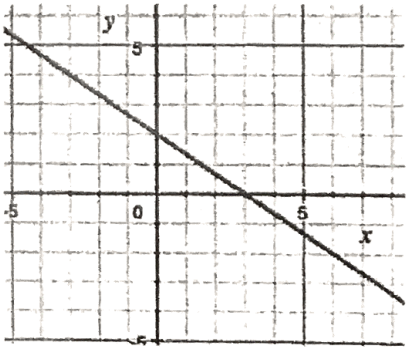

C)




D)




23. Which equation is graphed here?




A) $y = 2 + \frac{2}{3}x$

B) $y = 2 - \frac{2}{3}x$

C) $y = -\frac{2}{3}x - 2$

D) $y = -\frac{2}{3}x + 2$

MA.912.A.1.6

24. Simplify.

$3^2 \cdot 3^5 \cdot 3^{-3}$

A) $3^{-4}$ C) $3^{-10}$

B) $3^4$ D) $3^{10}$

MA.912.A.3.1

25. Solve the system of equations.

$2x - y = 5$
$3x + 2y = 4$

A) (3, 1) C) (2, -1)

B) (0, 2) D) $(\frac{9}{7}, \frac{17}{7})$

MA.912.A.1.5

26. State one of the factors of the quadratic expression.

$x^2 + x - 12$

A) (x+3) C) (x+6)

B) (x+4) D) (x-4)

$(x+4)(x-3)$

MA.912.A.1.2

27. Simplify.

$(2x - 10) - (3x^2 + 10x) + (2x^3 + 3x^2)$

$3x^2 + 2x^3 + 2x - 10 - 3x^2 - 10x$

A) $2x^3 - 8x - 10$ C) $2x^3 + 6x^2 + 12x - 10$

B) $2x^3 - 6x^2 + 12x - 10$ D) $8x - 10x^3 + 5x^5$

MA.912.A.1.2

28. Multiply: $(x + 2)(2x^2 - 3x + 5)$.

A) $2x^3 - 7x^2 - x + 10$ C) $2x^3 + 7x^2 + 11x + 10$

B) $2x^3 + x^2 - x + 10$ D) $2x^3 - 7x^4 - x^2 + 10$

MA.912.A.3.1

29. What is the value of $x$, when $-9(x - 5) = x + 22\frac{1}{2}$?

A) $x = 1\frac{3}{4}$ C) $x = 2\frac{2}{3}$

B) $x = 2\frac{1}{4}$ D) $x = 2\frac{3}{4}$

MA.912.A.3.6

30. Solve the system of equations.

$2x - y = 5$
$3x + 2y = 4$

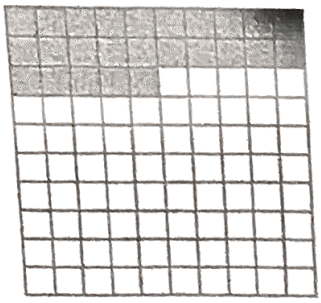
A) (3, 1) C) (2, -1)

B) (0, 2) D) $(\frac{9}{7}, \frac{17}{7})$

PERT PRACTICE & REVIEW

## FRACTIONS, DECIMALS & PERCENTS

1)

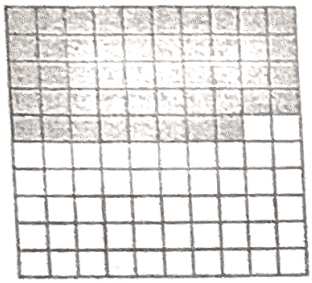


Fraction 25/100 = 1/4

Decimal .25

Percent 25%

2)

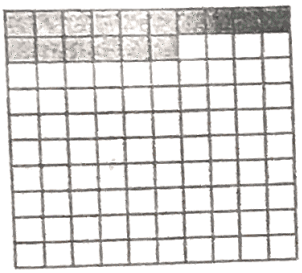


Fraction 48/100

Decimal .48

Percent 48%

3)

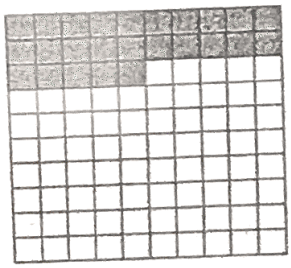


Fraction 16/100

Decimal .16

Percent 16%

4)

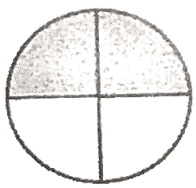


Fraction 25/100 = 1/4

Decimal .25

Percent 25%

5)

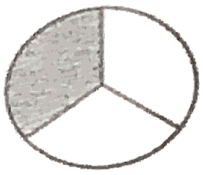


Fraction 2/4 = 1/2

Decimal .5

Percent 50%

6)



Fraction $\frac{1}{3}$

Decimal $.3\overline{3}$

Percent 33%

| Exponents | |
|---|---|
| 1) $5^6 = 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$ | 15,625 |
| 2) $3^4 =$ | 81 |
| 3) $6^3 =$ | 216 |
| 4) $8^0 =$ | 1 |
| **Scientific Notation** | |
| 1) $2.66 \times 10^4$ | 26,600 |
| 2) $7.75 \times 10^{-1}$ | .775 |
| 3) $8.3 \times 10^7$ | 83,000,000 |
| 4) $4 \times 10^{-5}$ | .00004 |

Simplifying Expressions with Exponents

1) $(x^{-2}x^{-3})^4$ $\frac{1}{x^{20}}$ or $x^{-20}$

2) $(x^4)^{-3} \cdot 2x^4 = \frac{2}{x^8}$

3) $(n^3)^3 \cdot 2n^{-1} = 2n^8$

4) $(2v)^2 \cdot 2v^2 = 8v^4$

5) $(2nm^3)(-4m^2w^3) = -8m^5nw^3$

6) $-5^2(x^2y)(x^2y^5) = -25x^4y^6$

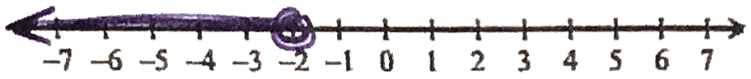
$\frac{3xy^3}{3xy^5} = \frac{1}{y^2}$

$\frac{-10w^3y^5}{5wy^2} = -2w^2y^3$

$\frac{12ab^5c^3}{2a^4c^2} = \frac{6b^5c}{a^3}$

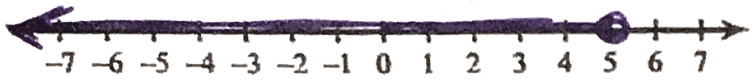
## Graph Inequalities

1) $-x \geq 2$




$X \leq -2$

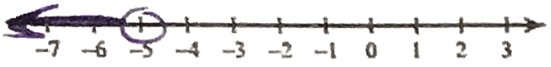
2) $n \leq 5$




3) $n - 6 \leq -14$

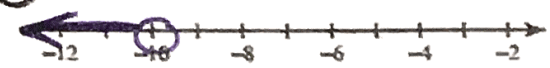

$n \leq -8$

4) $b - 7 < -12$



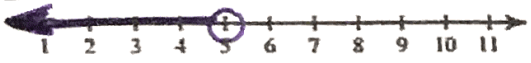

$b < -5$

5) $-b - 2 > 8$




$b < -10$

6) $-4(3 + n) > -32$




$n < 5$

## Solve Equations

1) $4(a + 1) = 2$

$a = -\frac{1}{2}$

2) $3 - 9x = -6 - 8x$

$X = 9$

3) $16 - 7m = 30$

$m = -2$

4) $\frac{5+w}{8} = 5$

$w = 35$

5) $-4 + 5r = r$

$r = 1$

6) $10y - 6 = 24$

$y = 3$

## Operations with Polynomials

1) $(5x^2 - 3x + 4) + (-3x^2 - 4)$ $2x^2 - 3x$

2) $(3x^2 - 2x + 1) - (2x^2 + x - 1)$ $x^2 - 3x + 2$

3) $(10x^3 + 15) - (6x^3 - x + 11)$ $4x^3 + x + 4$

4) $-3x(-5x)(5x + 2)$ $75x^3 + 30x^2$

5) $(x - 4)(x + 4)$ $x^2 - 16$

6) $(-6n)(3n^2)$ $-18n^3$

7) $-2x^2(5 + 3x^2 - 7x^3)$ $14x^5 - 6x^4 - 10x^2$

8) $\frac{27w^2 + 18w - 36}{-9}$ $-3w^2 - 2w + 4$

9) $\frac{3x^2y + 6xy - 9x^2y^2}{3xy}$ $x + 2 - 3xy$

10) $\frac{3x^2 + 6x}{2x}$ $\frac{3x + 6}{2}$

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# PERT Practice Test #2

**Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

____ 1. What is the quotient of $\left(6y^6 - 9y^4 + 12y^2\right) \div \left(3y^2\right)$?

a. $2y^4 + 3y^2 + 4$
b. $2y^4 - 3y^2 + 4$
c. $2y^4 - 3y^2 - 4$
d. $2y^4 + 3y^2 - 4$

____ 2. What is the quotient of $\left(3x^2 - 9x\right) \div (3x)$?

a. $x + 3$
b. $-x - 3$
c. $x - 3$
d. $x - 9$

____ 3. What is the quotient of $\left(16z^2 - 20z\right) \div (4z)$?

a. $4z - 5$
b. $4z + 5$
c. $-z$
d. $9z$

____ 4. What is the quotient of $\left(2n^2 + 11n - 6\right) \div (n + 6)$?

a. $n - 2$
b. $n + 2$
c. $2n + 1$
d. $2n - 1$

____ 5. Solve by substitution:

$3x + 2y = -4$

$y = 4x - 2$

a. $(0, -2)$ b. no solution c. $(2, 6)$ d. $(-1, -\frac{1}{2})$



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**What is the solution of the system? Use elimination.**

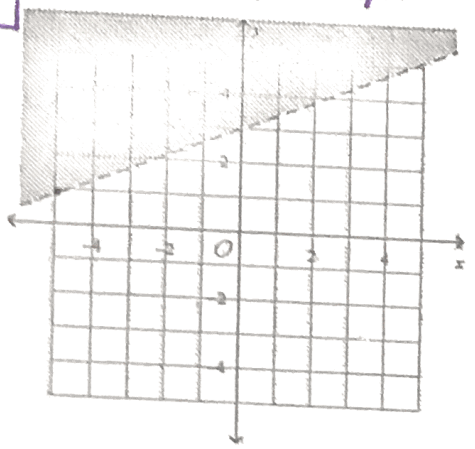
_____ 6. $5x + 4y = -2$
$x - 4y = 14$

a. (3, –4.3) b. (–3, 2) c. (2, –3) d. (4, 1)

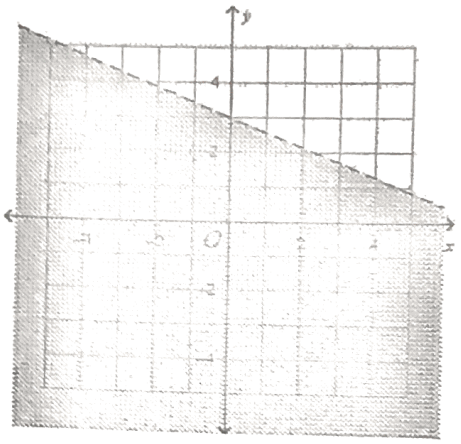
**Graph the inequality.**

_____ 7. $3x - 7y < -21$ $y > \frac{3}{7}x + 3$

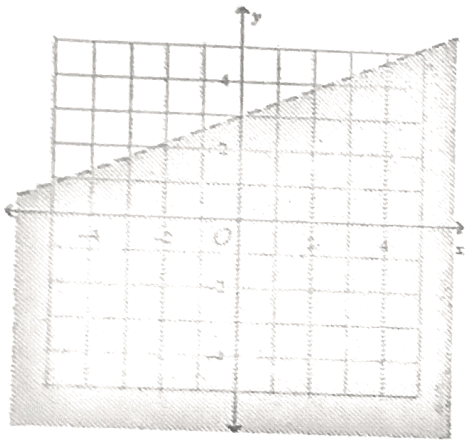
a.



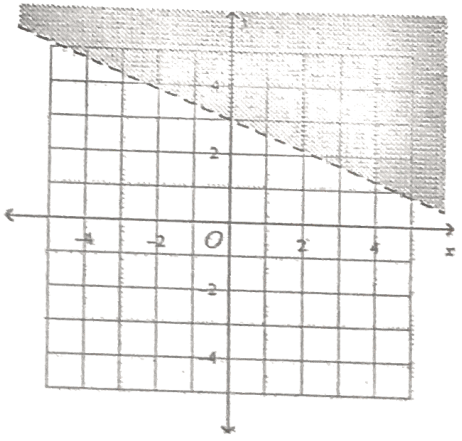
c.



b.



d.





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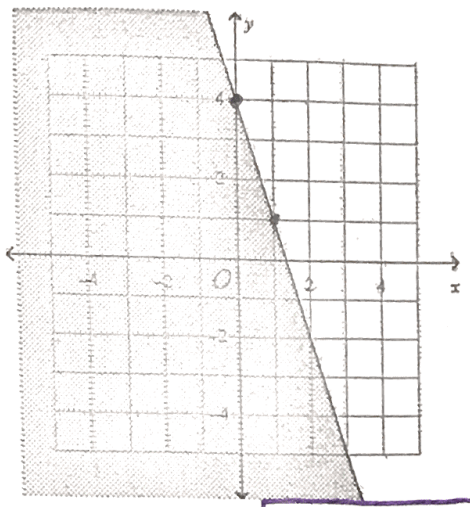
**Which inequality represents the graph?**

___ 8.




$y \leq -3x + 4$

a. $y \geq -3x + 4$ b. $y \leq -3x + 4$ c. $y \geq -3x - 4$ d. $y \leq -3x - 4$

___ 9. Evaluate $u + xy$, for $u = 18$, $x = 10$, and $y = 8$.
a. 188 b. 36 c. 98 d. 224

___ 10. Evaluate $\frac{u}{z} + xy^2$, for $u = 20$, $x = 4$, $y = 7$, and $z = 10$.
a. 294 b. 198 c. 900 d. 786

$\frac{20}{10} + (4)(7^2)$

**What is the solution of the equation?**

___ 11. $3x - 9 - 5x = -7$
a. $-3$ b. 0 c. $-1$ d. 2

**What is the solution of the equation?**

___ 12. $-4x - 9 = -5 - 6x$
a. 4 b. 1 c. $-1$ d. 2

**What is the solution of the equation?**

___ 13. $3p - 1 = 5(p - 1) - 2(7 - 2p)$
a. 3 b. 0 c. $-9$ d. $-10$

___ 14. Which equation has no solution?
a. $8 - (5v + 3) = 5v - 5$ $v = 1$ c. $3w + 4 - w = 5w - 2(w - 2)$ $w = 0$
b. $3m - 6 = 5m + 7 - m$ $m = -13$ d. $7y + 9 = 7y - 6$



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**What are the solutions of the inequality?**

_____ 15. $12x - 3x + 11 > 4x - (17 - 9x)$

a. $x > -7$ b. $x < 7$ c. $x < -\frac{14}{11}$ d. $x > -\frac{14}{11}$

**What are the solutions of the inequality?**

_____ 16. $10x - 10 - 7x \geq 3x - 2$

a. $x \geq -8$ c. all real numbers

b. $x \leq 8$ d. no solution

**Simplify the product.**

_____ 17. $(-2h + 5)(5h - 2)$

a. $-10h^2 - 21h + 10$ c. $-10h^2 - 29h - 10$

b. $-10h^2 + 21h + 10$ d. $-10h^2 + 29h - 10$

**Simplify the product.**

_____ 18. $(4x - 4)(3x - 4)$

a. $12x^2 - 28x + 16$ c. $12x^2 + 4x - 16$

b. $12x^2 - 4x - 16$ d. $12x^2 + 28x + 16$

**What is the factored form of the following expressions?**

_____ 19. $d^2 - 18d + 80$

a. $(d - 8)(d + 10)$ c. $(d - 8)(d - 10)$

b. $(d + 8)(d + 10)$ d. $(d + 8)(d - 10)$

**What is the factored form of the expression?**

_____ 20. $15x^2 - 16xy + 4y^2$

a. $(3x - 2y)(5x + 2y)$ c. $(3x + 2y)(5x - 2y)$

b. $(3x - 2y)(5x - 2y)$ d. $(3x + 2y)(5x + 2y)$

_____ 21. $50x^2 + 80x + 32$

a. $2(5x + 4)^2$ c. $2(5x - 4)^2$

b. $2(4x + 5)^2$ d. $2(4x - 5)^2$

_____ 22. Solve $3x^2 + 6x + 1 = 0$. If necessary, round your answer(s) to the nearest hundredth.

a. There are no solutions. c. $x \approx -1.10$ or $x \approx -10.90$

b. $x \approx -5.18$ or $x \approx -6.82$ d. $x \approx -0.18$ or $x \approx -1.82$



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