Intermediate Algebra Final Review Practice Quiz 01 - Be Sure to Click View Results at the Very End to See How you Did!!

Name: David Hays (Preview)
Start time: December 4, 2008 5:08am
Time allowed: 90 minutes
Number of questions: 25

Finish Help

Question 1 (4 points)

Uniform motion problems
A plane flies 600 miles, with a tail wind, in 2 hours. It takes the same plane 3 hours to fly the 600 miles when flying against the wind. Which is the plane's speed in still air?

a. 50 mph
b. 300 mph
c. 200 mph
d. 250 mph

Save answer

Question 2 (4 points)

Divide complex numbers
Simplify.

$$\frac{4-3i}{7+i}$$

a. $\frac{1}{2}+\frac{1}{2}i$
b. $\frac{1}{2}-\frac{1}{2}i$
c. $-\frac{1}{2}-\frac{1}{2}i$
d. $-\frac{1}{2}+\frac{1}{2}i$

Save answer

Question 3 (4 points)

Find equations of parallel and perpendicular lines
Find the equation of the line, in standard form, that is perpendicular to $9x+8y=4$ and contains $(-3,\ -4)$.

a. $-3x-4y=60$
b. $-8x+9y=-12$
c. $-9x-8y=60$
d. $8x+9y=-12$

Save answer

Question 4 (4 points)

Solve inequalities in one variable

Solve.

$-\frac{x}{6} \leq 6.8$

a. $x \leq -40.8$

b. $x \geq -40.8$

c. $x \leq -1.13$

d. $x \geq -1.13$

Save answer

Question 5 (4 points)

Factor trinomials of the form x^2 + bx + c

Factor.

$x^2 + 4x + 4$

a. $(x+2)^2$

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

c. $(x+4)^2$

d. $(x-2)^2$

Save answer

Question 6 (4 points)

Solve literal equations

Solve the formula for the given variable.

$W = p(V_2 - V_1)$ for V_1

a. $V_1 = \frac{W}{pV_2 - p}$

b. $V_1 = \frac{pV_2 - W}{p}$

c. $V_1 = \frac{W - pV_2}{p}$

d. $V_1 = \frac{W}{p - pV_2}$

Save answer

Question 7 (4 points)

Factor a monomial from a polynomial

Factor.

$25x^3 - 15x^5$

a. $5(5x^3 - 3x^5)$

b. $x^3(25 - 15x^2)$

c. $5x^2(x - 3x^4 + 5)$

d. $5x^3(5 - 3x^2)$

Save answer

Question 8 (4 points)

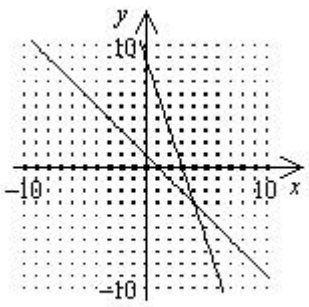
Solve a system of linear equations by graphing

Solve by graphing.

$y = 1 - x$

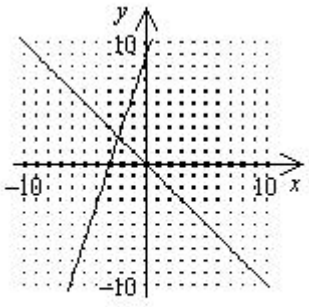
$y = 3x + 9$

a.



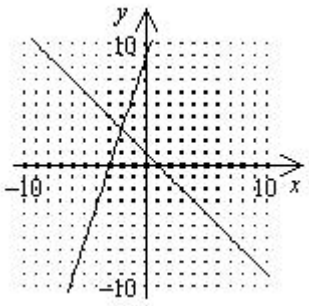
$(4, -3)$

b.



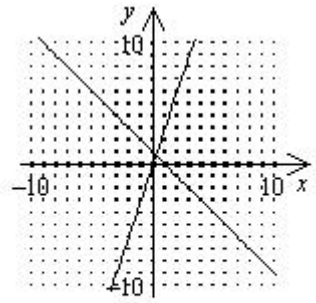
$\left(-\frac{9}{4}, \frac{9}{4}\right)$

c.



$(-2, 3)$

d.



$\left(\frac{1}{4}, \frac{3}{4}\right)$

Save answer

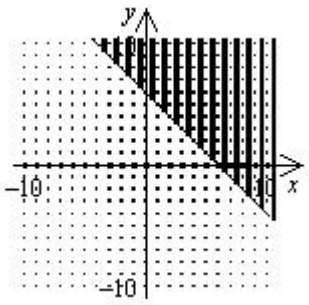
Question 9 (4 points)

Graph the solution set of an inequality in two variables

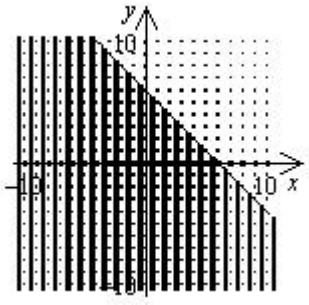
Graph.

$-y \geq x - 6$

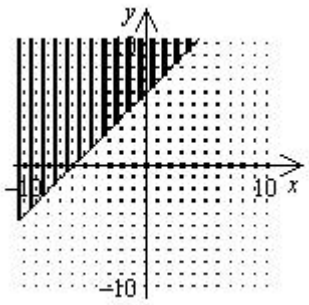
a.



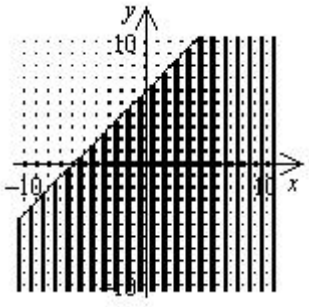
b.



c.



d.



Save answer

Question 10 (4 points)

Simplify expressions with rational exponents

Simplify.

$64^{-4/3}$

a. $\frac{1}{256}$

b. 256

c. $\frac{1}{128}$

d. $-\frac{1}{256}$

Save answer

Question 11 (4 points)

Variation problems

The total cost of gasoline varies directly with the number of gallons purchased. Harry pays $12.80 for 8 gallons of gasoline. Write a direct variation equation that shows the relationship between the total cost of gasoline, *c*, and the number of gallons purchased, *n*.

Equation: Create equation Equation editor

Save answer

Question 12 (4 points)

Add and subtract radical expressions

Simplify.

$6\sqrt{36x} - 5\sqrt{36x}$

a. $6\sqrt{x}$

b. x

c. $6x$

d.

○ $\sqrt{x}$

Save answer

Question 13 (4 points)

Add and subtract complex numbers

Simplify.

$(-4-5i)+(-7+6i)$

○ a. $58+11i$

○ b. $3-11i$

○ c. $-11-i$

○ d. $-11+i$

Save answer

Question 14 (4 points)

Find the length and midpoint of a line segment

Find the midpoint of the segment connecting $(-7, -9)$ and $(2, 8)$.

○ a. $\left(-\frac{9}{2}, -\frac{17}{2}\right)$

○ b. $(-5, -1)$

○ c. $\left(-\frac{5}{2}, -\frac{1}{2}\right)$

○ d. $(5, 1)$

Save answer

Question 15 (4 points)

Find equations of parallel and perpendicular lines

Find the equation of the line, in slope-intercept form, that is parallel to $-9x-4y=9$ and contains $(-8, 5)$.

○ a. $y=-\frac{9}{4}x+\frac{1}{13}$

○ b. $y=-\frac{9}{4}x-13$

○ c. $y=\frac{9}{4}x-13$

○ d. $y=-\frac{4}{9}x+\frac{1}{13}$

Save answer

Question 16 (4 points)

Factor the difference of two perfect squares and factor perf

Factor.

$49x^2 - 25y^2$

Equation: Create equation Equation editor

Save answer

Question 17 (4 points)

Solve equations using the Addition and Multiplication Proper

Solve.

$-\frac{9}{4}x = -4$

a. 9

b. $1\frac{7}{9}$

c. $-\frac{8}{9}$

d. $-1\frac{1}{4}$

Save answer

Question 18 (4 points)

Solve literal equations

Solve the formula for the given variable.

$A = 2\pi pw$ for p

a. $p = \frac{2\pi w}{A}$

b. $pw = \frac{A}{2\pi}$

c. $p = \frac{A}{2\pi w}$

d. none of these

Save answer

Question 19 (4 points)

Add and subtract complex numbers

Simplify.

$-9 + 17i - (-9 - 7i)$

a. $-18 + 10i$

b. $-24i$

c. $18-10i$

d. $24i$

Save answer

Question 20 (4 points)

Evaluate a function

Find $f(-2)$ given that $f(x)=-2x^2+3x-20$.

a. -16

b. -22

c. -14

d. -34

Save answer

Question 21 (4 points)

Variation problems

If $x=0.4$ when $y=12.35$ and *y* varies inversely with *x,* which shows *y* when $x=2.6$?

a. $y=0.08$

b. $y=80.28$

c. $y=12.84$

d. $y=1.9$

Save answer

Question 22 (4 points)

Multiply and divide rational expressions

Simplify.

$$\frac{x+4}{3x+4y}\cdot\frac{9x^2-16y^2}{2x^2+3x-20}$$

a. $\dfrac{3x-4y}{2x-5}$

b. $-\dfrac{3x-4y}{3}$

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

d. $\dfrac{3x^2-4y^2}{2x-5}$

Save answer

Question 23 (4 points)

Evaluate polynomial functions

Evaluate the polynomial.

$4f^3 - 6f^2 + 3f - 12$ when $f = 4$

- a. 163
- b. 0
- c. 170
- d. 160

Save answer

Question 24 (4 points)

Solve fractional equations

Solve.

$$-\frac{1}{x} + \frac{1}{9x} = -3$$

- a. -15
- b. $\frac{8}{27}$
- c. $-\frac{1}{15}$
- d. no solution

Save answer

Question 25 (4 points)

Multiply radical expressions

Simplify.

$$\left(3\sqrt{x} + \sqrt{y}\right)\left(\sqrt{x} + 8\sqrt{y}\right)$$

- a. $3x + 25\sqrt{xy} + 8y$
- b. $3x + 8y$
- c. $3\sqrt{x} + 13\sqrt{xy} + 8\sqrt{y}$
- d. $3x - 23\sqrt{xy} + 8y$

Save answer

Finish Help