

① Check HW first
with Solutions

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② Pick Up The
Warm Up

27e arithmetic $t_n = n + (x-1)$

f geometric $t_n = 3(4)^{n-1}$
 $r = 4$

Zero or first term format

Question #1

Write an appropriate formula for each sequence

20, 23, 26, 29, $t_n = 20 + 3(n-1)$

45, 40, 35, 30, $t_n = 45 - 5(n-1)$

6, 12, 24, 48, $t_n = 6(2)^{n-1}$

90, 30, 10, $t_n = 90\left(\frac{1}{3}\right)^{n-1}$

$y = ab^x$

$\frac{10}{30}$

$\frac{30}{90}$

Question #2

In a new sequence, what does the following mean? $t(32) = 1800$

the 32nd term is 1800

Question #3

Determine whether 530 is a term of the sequence $t(n) = 8 + 6n$

$530 = 8 + 6n$

-8

$522 = 6n$

$n = 87$

Since 87 is a whole number

530 is a term.

Question #4 $y = 4x$ $x = \# \text{ videos}$
 $y = 2.50x + 21$

Suppose a video store charges nonmembers \$4 to rent each video. A store membership costs \$21 and members pay only \$2.50 to rent each video. For what number of videos is the cost the same?

non members $y = 4x$ members $y = 2.50x + 21$

$$\begin{array}{r} 4x = 2.50x + 21 \\ -2.50x \quad -2.50x \\ \hline 1.50x = 21 \\ x = 14 \end{array}$$

So the costs will be the same when 14 videos are sold.

QUESTION #5 use your graphing calculator

Graph $f(x) = \sqrt{3-x}$ over the domain $-6 < x \leq 3$. MAKE a sketch from your GDC

QUESTION #6

Factor Completely (In case you forget, this means factor, then factor again)

$x^3 - 36x$

$x(x^2 - 36)$

$x(x+6)(x-6)$

QUESTION #7

Simplify the expressions so there are no negative exponents

$$n^{-4} = \frac{1}{n^4} \quad \left(\frac{x}{3}\right)^{-2} = \left(\frac{3}{x}\right)^2 = \frac{9}{x^2} \quad \left(\frac{1}{3}\right)^{-1} = \left(\frac{3}{1}\right)^1 = 3$$

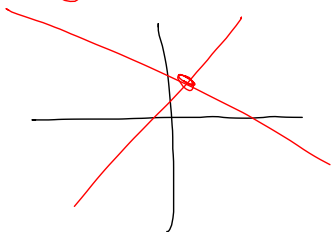
$$\frac{2}{5n^3} = \frac{2}{5n^3n^2}$$

$$= \boxed{\frac{2}{5n^5}}$$

Systems of equations

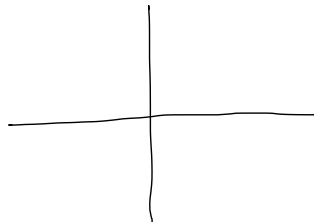
$$2x - 3y = 7$$

$$y = 2x + 5$$



$$2x - 3y = 7$$

$$y = 2x + 5$$



NOTES

Using Substitution

Solve a System of
linear equations

example 1

$$y - 2x = 3$$

$$x - y = 4$$

Solve
for x

$$\begin{array}{r} x - y = 4 \\ +y \quad +y \end{array}$$

$$x = 4 + y$$

$$\begin{array}{l} x = -7 \\ y = -11 \end{array}$$

Solution
 $(-7, -11)$

$$\begin{array}{l} x = 4 + -11 \\ x = -7 \end{array}$$

Pick ONE of
the four
variables

$$y - 2(4 + y) = 3$$

$$y - 8 - 2y = 3$$

$$\begin{array}{r} -y - 8 = 3 \\ +8 \quad +8 \end{array}$$

$$-y = 11$$

$$\underline{\underline{y = -11}}$$

To be completely successful:

- ≡ leave all values exact
- ≡ Write a complete answer when finished.

example 2

$$2x + 3y = 10$$

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

$$\begin{array}{r} 2x + 3y = 10 \\ -2x \\ \hline \end{array}$$

$$3y = \frac{10 - 2x}{3}$$

$$y = \frac{10 - 2x}{3}$$

Solution
(2, 2)

$$y = \frac{10 - 2(2)}{3} = \frac{6}{3} = 2$$

$$3x - 4\left(\frac{10 - 2x}{3}\right) = -2$$

multiply by 3

$$(3)3x - \cancel{4}\left(\frac{10 - 2x}{\cancel{3}}\right) = (-2)(3)$$

$$9x - 4(10 - 2x) = -6$$

$$9x - 40 + 8x = -6$$

$$17x - 40 = -6$$

$$17x = 34$$

divide by 17
 $x = 2$

B.B.

You'll see your
Test 1 in a few
minutes.



Can I re-do a Test?

- ✓ Possibly (good attendance, doing most assignments on time)
- ✓ Come to get help within 3 to 4 days

Can re-take one Test and still get a B in course

Can re-take 2 tests and still get a C

etc. ●

Ground Rules For Looking At Tests

- Absolutely no cell phones out until all tests are collected.
- If you have not taken it, go to the hall until I come to get you.
- Be smart.... learn from looking at the solutions.

Assignment (Appendix)

A....10

B....22, 50, 52-53, 107-108