Name:_____ Block:___

# Quiz: Review (II). Chapters 1 and 2

Group B.

The real thing!

There are 5 questions in this quiz, each of equal value.
Standard time for the test is 15 minutes .
No calculator is allowed. (accommodation excepted)

**Question 1:**
Simplify.

$$7 - [(x - 2) - (4 + 4x)] \div 3 - 4x =$$

$x - 2 - 4 - 4x$

$-6 - 3x$

$7 - [-6 - 3x] \div 3 - 4x =$

$7 + [6 + 3x] \div 3 - 4x = 7 + 2 + x - 4x$

$= \boxed{9 - 3x}$

**Question 2:**

Solve for x.

$$6 - (x + 1) \cdot 2 = 22 - 4(2x - 3)$$

$6 - 2x - 2 = 22 - 8x + 12$

$4 - 2x = 34 - 8x$

$6x = 30$

$\boxed{x = 5}$

check:

$6 - (5 + 1) \cdot 2 \stackrel{?}{=} 22 - 4(2 \cdot 5 - 3)$

$6 - 12 \stackrel{?}{=} 22 - 28$

$-6 \stackrel{?}{=} -6$ ✓

**Question 3:**

Simplify the following expressions so they include only positive exponents.

1. $(4x^{-3})^2$

$4^2(x^{-3})^2 = \boxed{\frac{16}{x^6}}$

2. $\left(\frac{-4}{x^4}\right)^{-2}$

$\frac{(-4)^{-2}}{(x^4)^{-2}} = \frac{(x^4)^2}{(-4)^2} = \boxed{\frac{x^8}{16}}$

3. $(5 \cdot 10^{-3}) \times (3 \cdot 10^7)$

$5 \cdot 3 \cdot 10^{-3} \cdot 10^7 =$

$\boxed{15 \cdot 10^4}$

**Question 4:**

Simplify the following expression so it includes only positive exponents.

$$\left(\frac{x^2 \cdot 2 \cdot y^{-2}}{6 \cdot x^{-3} \cdot y^{-3}}\right)^3$$

$\left(\frac{2}{6}\right)^3 \cdot \left(\frac{x^2}{x^{-3}}\right)^3 \cdot \left(\frac{y^{-2}}{y^{-3}}\right)^3 =$

$\frac{1}{27} \cdot x^{15} \cdot y^3 = \boxed{\frac{x^{15} \cdot y^3}{27}}$

**Question 5.a:**

Solve the equation $S = 5 + vt$ , for $v$.

$S - 5 = vt$

$\boxed{\frac{S-5}{t} = v}$

**Question 5.b:**

Solve the equation $E = xT - 2yT$ , for $T$.

$E = T \cdot (x - 2y)$

$\boxed{\frac{E}{x-2y} = T}$

=== End ====

Name:_____ Block:___

# Quiz: Review (II). Chapters 1 and 2

Group A.

The real thing!

There are 5 questions in this quiz, each of equal value.
Standard time for the test is 15 minutes .
No calculator is allowed. (accommodation excepted)

**Question 1:**
Simplify.

$$5 - [(x - 2) - (4 + 4x)] \div 3 - 3x$$

$x - 2 - 4 - 4x$

$5 - [-3x - 6] \div 3 - 3x =$

$5 + (6 + 3x) \div 3 - 3x = 5 + 2 + x - 3x =$

$= \boxed{7 - 2x}$

**Question 2:**

Solve for x.

$$6 - (x + 2) \cdot 2 = 22 - 4(2x - 1)$$

$6 - 2x - 4 = 22 - 8x + 4$

$2 - 2x = 26 - 8x$

$6x = 24$

$\boxed{x = 4}$

check:
$6 - (4+2) \cdot 2 \stackrel{?}{=} 22 - 4(2 \cdot 4 - 1)$

$6 - 12 \stackrel{?}{=} 22 - 28$

$-6 \stackrel{?}{=} -6$ ✓

**Question 3:**

Simplify the following expressions so they include only positive exponents.

1. $(3x^{-3})^2$

$3^2 \cdot (x^{-3})^2 = 9x^{-6} = \frac{9}{x^6}$

2. $\left(\frac{-4}{x^4}\right)^{-2}$

$\frac{(-4)^{-2}}{(x^4)^{-2}} = \frac{(x^4)^2}{(-4)^2} = \frac{x^8}{16}$

3. $(5 \cdot 10^{-3}) \times (3 \cdot 10^7)$

$5 \cdot 3 \cdot 10^{-3} \cdot 10^7 =$

$15 \cdot 10^4$

**Question 4:**

Simplify the following expression so it includes only positive exponents.

$$\left(\frac{x^2 \cdot 3 \cdot y^{-2}}{6 \cdot x^{-3} \cdot y^{-3}}\right)^3$$

$\left(\frac{3}{6}\right)^3 \cdot \left(\frac{x^2}{x^{-3}}\right)^3 \left(\frac{y^{-2}}{y^{-3}}\right)^3 =$

$\frac{1}{8} x^{15} \cdot y^3 = \frac{x^{15} \cdot y^3}{8}$

**Question 5.a:**

Solve the equation $S = 5 + vt$ , for $v$.

$S - 5 = vt$

$\frac{S-5}{t} = v$

**Question 5.b:**

Solve the equation $E = xT - 2yT$ , for $T$.

$E = T(x - 2y)$

$\frac{E}{(x-2y)} = T$

=== End ====