Regents Exam Questions
CC.A.SSE.1: Modeling Expressions 1
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Name: KEY

7 If Angelina's weekly allowance is d dollars, which expression represents her allowance, in dollars, for x weeks?
1) dx
2) $7dx$
3) $x+7d$
4) $\frac{d}{x}$

$15/week
in 3 weeks
it's $45
15(3)
d(x)

8 Which expression represents the number of hours in w weeks and d days?
1) $7w+12d$
2) $84w+24d$
3) $168w+24d$
4) $168w+60d$

- 24hr. (7 day) = 168 hours in 1 week
- 14 hrs. in 1 day

9 Jose wants to ride his bike a total of 50 miles this weekend. If he rides m miles on Saturday, which expression represents the number of miles he must ride on Sunday?
1) $m-50$
2) $m+50$
3) $50-m$
4) $50m$

50 - m

10 Owino gets paid $280 per week plus 5% commission on all sales for selling electronic equipment. If he sells n dollars worth of electronic equipment in one week, which algebraic expression represents the amount of money he will earn that week?
1) $280n+5$
2) $280n+0.05$
3) $280+0.05n$
4) $280+5n$

.05n + 280

11 Julie has three children whose ages are consecutive odd integers. If x represents the youngest child's age, which expression represents the sum of her children's ages?
1) $3x+3$
2) $3x+4$
3) $3x+5$
4) $3x+6$

x
x+2
x+4
x + x+2 + x+4
3x+6

12 What is the perimeter of a regular pentagon with a side whose length is $x+4$?
1) x^2+16
2) $4x+16$
3) $5x+4$
4) $5x+20$

5(x+4)
5x+20

13 The length of a rectangular room is 7 less than three times the width, w, of the room. Which expression represents the area of the room?
1) $3w-4$
2) $3w-7$
3) $3w^2-4w$
4) $3w^2-7w$

(3w - 7)

w = width
3w - 7 = length

w(3w-7) = A
$3w^2-7w=A$

Algebra I Practice CC.A.REI.3: Solving Linear Equations 2
www.jmap.org

NAME:_____

CCSS.A.REI.3: Solve linear equations and linear inequalities in one variable, including equations with coefficients represented by letters (literal that are linear in the variables being solved for).

Solve:

1. $-2x+15+4x+15=-6$

[A] -12 [B] 12 [C] 18 [D] -18

$2x+30=-6$
$-30\ \ -30$
$2x=-36$
$x=-18$

2. $-9x+21+11x+21=2$

[A] -22 [B] -20 [C] 20 [D] 22

$2x+42=2$
$2x=-40$
$x=-20$

3. $2=5(x+9)+8x$

[A] $\frac{7}{13}$ [B] $-3\frac{4}{13}$

[C] $3\frac{4}{13}$ [D] $-\frac{7}{13}$

$2=5x+45+8x$
$2=45+13x$
$-43=12x$
$x=\frac{-43}{13}$
$x=-3\frac{4}{13}$

4. $6=6(x+5)-2x$

[A] $-\frac{1}{4}$ [B] -6 [C] 6 [D] $\frac{1}{4}$

$6=6x+30-2x$
$6=4x+30$
$4x=-24$
$x=-6$

5. $-8=10(x-3)+6x$

[A] $\frac{11}{16}$ [B] $1\frac{3}{8}$ [C] $-1\frac{3}{8}$ [D] $-\frac{11}{16}$

$-8=10x-30+6x$
$-8=16x-30$
$22=16x$
$\frac{22}{16}=\frac{16x}{16}$
$x=\frac{11}{8}$
$x=1\frac{3}{8}$

6. $5=2(x-8)-x$

[A] -21 [B] 3 [C] -3 [D] 21

$5=2x-16-x$
$+16\ \ +16$
$21=x$

7. $3=10(x-4)-5x$

[A] $\frac{1}{5}$ [B] $8\frac{3}{5}$ [C] $-8\frac{3}{5}$ [D] $-\frac{1}{5}$

$3=10x-40-5x$
$3=5x-40$
$\frac{43}{5}=\frac{5x}{5}$
$x=8\frac{3}{5}$

8. $7=8(x+5)+5x$

[A] $\frac{2}{13}$ [B] $2\frac{7}{13}$

[C] $-\frac{2}{13}$ [D] $-2\frac{7}{13}$

$7=8x+40+5x$
$\frac{-33}{13}=\frac{13x}{13}$
$x=-2\frac{7}{13}$

9. $6n+12-8n=22$

$-2n+12=22$
$-2n=10$
$n=-5$

10. $5n+26-3n=54$

$2n+26=54$
$-26\ \ -26$
$2n=28$
$n=14$