minutes

Integrated Algebra 2 and Precalculus

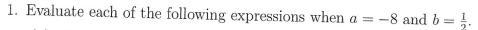
Exam: Chapter 1 of Algebra 2

Basic Concepts of Algebra

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Date: 7/8/25

Instructions: Answer all questions to the best of your ability. Show all your work in the space provided for full credit.



(16)

(a) ab + 2b + 3a $(-8)(\frac{1}{2}) + 2(\frac{1}{2}) + 3(-8) = -4+1-24$

(b)

(c) $4(a^2b + b^2a)$ $Y(6-8)^2 \cdot (.5) + (.5)^2 \cdot (-8) = Y(32+0.256-8)$

(d) $(a-2)\sqrt{-ab}$ (-8-2) V-(8) VO.5 = -10. V8. JZ=-10.2. V2:

2. Simplify the product as much as possible.

(5)

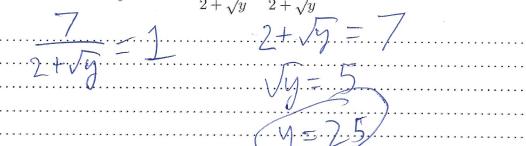
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3. Decide whether each set is a field under the operation If the set is not a field, name at least one field propert (a) The natural numbers (N) No Multi plicatic invesses	ty that does not hold.
(b) The integers (Z) No mutiplicative inverse	
(c) The rational numbers (Q) (losed nudle addition & V Mas inverses	multiplication,
(d) The negative rational numbers Not closed under multiple	eation 2-3-(-2)=6 Lin &

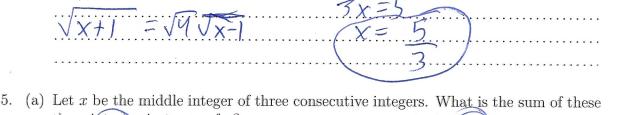
1. Solve for the variable in each equation.	(10)

(8)

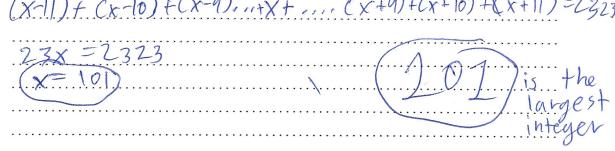
(a) Find all values of y such that $\frac{3}{2+\sqrt{y}} + \frac{4}{2+\sqrt{y}} = 1$.



(b) What values of x satisfy $\frac{\sqrt{x+1}+\sqrt{x-1}}{\sqrt{x+1}-\sqrt{x-1}} = 3?$ $\sqrt{x+1} + \sqrt{x-1} = 3\sqrt{x+1} - 3\sqrt{x-1}$ $4\sqrt{x-1} = 2\sqrt{x+1} \qquad x+1 = 4(x+1)$



- 5. (a) Let x be the middle integer of three consecutive integers. What is the sum of these three integers in terms of x? (x+1)+x+(x-1)=3x
 - (b) The sum of 23 consecutive integers is 2323. What is the largest of the integers? (Hint: Use the result from the first part.)



6. A grocer wants to mix peanuts and cashews to produce 20 lb of mixed nuts worth \$6.20/lb. How many pounds of each kind of nut should she use if peanuts cost \$4.80/lb

and cashews cost \$8.00/lb?
and caspews cost \$8.00/16? $(8.20-x) = 20.6.2$
$160 - 3.2 \times = 124$
3,2x = 36 (X= 15)
88790 Mx = 95