

1. Which rule describes the two numbers in each of the three ordered pairs below?

(4, 2), (8, 4), (10, 5)

- A The second number is equal to half of the first number.
B The second number is equal to the first number plus 2.
C The second number is equal to twice the first number.
D The second number is equal to the first number minus 2.
-

2. What number pair comes next in the table?

x	y
8	2
12	3
16	4
20	5

- A 22 and 5
B 22 and 6
C 24 and 5
D 24 and 6

3. Danny and Julie have new sticker books. Danny will put 4 stickers in his book every day, and Julie will put 6 stickers in her book every day.

Day	Danny	Julie
1	4	6
2	8	12
3	12	18

How many stickers will Danny have when Julie has 30 in her book?

- A 20
- B 24
- C 28
- D 30
-
4. Bert and Chad are saving quarters. Bert saves 4 quarters for every 3 that Chad saves. How many quarters will Chad have saved when Bert has saved 24?
- A 23
- B 18
- C 12
- D 6

5. Using this diagram, which of the following statements is true?

$$\triangle \triangle = \square \triangle \square \quad \triangle \square = \bigcirc \bigcirc$$

$$\triangle = 40$$

- A $\triangle < \bigcirc$
- B $\triangle < \square$
- C $\square > \bigcirc$
- D $\bigcirc < \triangle$

6. Maria made 7 dozen peanut butter cookies. She needs 144 cookies for the bake sale. Which expression gives the number of cookies she still needs to make?

- A $144 - (7 \times 12)$
 B $(7 \times 12) + 144$
 C $(144 - 7) \times 12$
 D $7 + 144 \times 12$





7. Conrad used a table to show how much money he saved compared to how much money he earned.

Money Earned	7	11	13	18
Money Saved	2	6	8	13

If E represents the amount of money earned, which expression states the rule used to determine the amount Conrad saved?


- A $E \div 5$
 B $E \times 5$
 C $E + 5$
 D $E - 5$

8. Ginnie used a table of values to help find solutions to problems.

Table of Values	
	= 4
	= 5
	= 6
	= 7

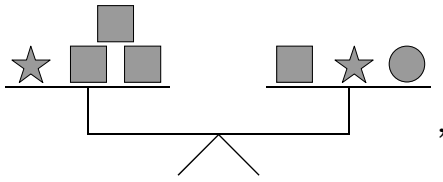
Ginnie wants to solve a problem that uses a symbol not on the table of values:

$$(4 + \text{trapezoid}) \times \square = 60$$

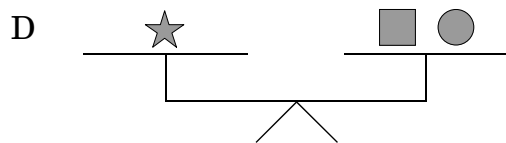
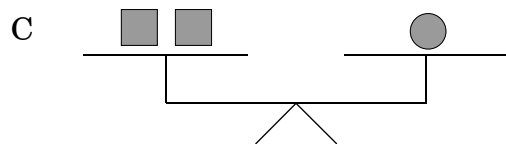
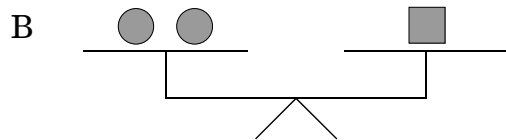
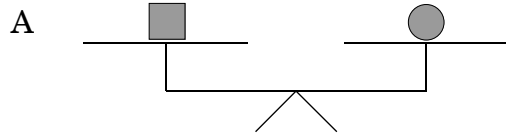
What is the value of  ?

- A 4
 B 5
 C 8
 D 12

9. If



which of the following must be true?



10. What is the value of the expression $4 \times 6 + 10 \div 2$?

- A 17
- B 29
- C 32
- D 44

11. Mr. Wade wrote an expression on the board.

$$37 - 3 \times 8 + 5 =$$

Which operation should be completed first to find the value of the expression?

- A $37 - 3$
- B 3×8
- C $8 + 5$
- D $37 + 5$

12. Which number sentence is an example of $(a \times b) \times c = a \times (b \times c)$?
- A $(12 \times 4) \times 2 = 2 \times (12 \times 4)$
- B $(9 \times 8) \times 6 = (8 \times 9) \times 6$
- C $(7 \times 4) \times 5 = 7 \times (4 \times 5)$
- D $(3 \times 2) \times 5 = 5 \times (2 \times 3)$

End of Goal 5 Sample Items

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Math Goal 5
Sample Items Key Report

- 1 **Objective:** 5.01
Identify, describe, and generalize relationships in which: a) Quantities change proportionally. b) Change in one quantity relates to change in a second quantity.
Thinking Skill: Applying **Correct Answer:** A
- 2 **Objective:** 5.01
Identify, describe, and generalize relationships in which: a) Quantities change proportionally. b) Change in one quantity relates to change in a second quantity.
Thinking Skill: Applying **Correct Answer:** D
- 3 **Objective:** 5.01
Identify, describe, and generalize relationships in which: a) Quantities change proportionally. b) Change in one quantity relates to change in a second quantity.
Thinking Skill: Applying **Correct Answer:** A
- 4 **Objective:** 5.01
Identify, describe, and generalize relationships in which: a) Quantities change proportionally. b) Change in one quantity relates to change in a second quantity.
Thinking Skill: Applying **Correct Answer:** B
- 5 **Objective:** 5.02
Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.
Thinking Skill: Analyzing **Correct Answer:** D
- 6 **Objective:** 5.02
Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.
Thinking Skill: Analyzing **Correct Answer:** A
- 7 **Objective:** 5.02
Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.
Thinking Skill: Applying **Correct Answer:** D
- 8 **Objective:** 5.02
Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.
Thinking Skill: Analyzing **Correct Answer:** C

Math Goal 5
Sample Items Key Report

- 9** **Objective:** **5.03**
Verify mathematical relationships using: a) Models, words, and numbers. b) Order of operations and the identity, commutative, associative, and distributive properties.
Thinking Skill: Analyzing **Correct Answer:** C
- 10** **Objective:** **5.03**
Verify mathematical relationships using: a) Models, words, and numbers. b) Order of operations and the identity, commutative, associative, and distributive properties.
Thinking Skill: Applying **Correct Answer:** B
- 11** **Objective:** **5.03**
Verify mathematical relationships using: a) Models, words, and numbers. b) Order of operations and the identity, commutative, associative, and distributive properties.
Thinking Skill: Applying **Correct Answer:** B
- 12** **Objective:** **5.03**
Verify mathematical relationships using: a) Models, words, and numbers. b) Order of operations and the identity, commutative, associative, and distributive properties.
Thinking Skill: Applying **Correct Answer:** C