Assessment: TransMath: Level 3, Unit 4, Quiz 1 Interactive Reinforcement

1. Write the missing number in the pattern.
3, 6, 9, __, 15, 18

   ○ **a.** 10

      Rationale: Try again. What are you counting by? Look at how one number differs from the next number to find the pattern. How does 3 differ from 6? How does 6 differ from 9?

   ○ **b.** 13

      Rationale: Try again. What are you counting by? Look at how one number differs from the next number to find the pattern. How does 3 differ from 6? How does 6 differ from 9?

   ◉ **c. 12**

      Rationale: Correct.

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2. Write the missing number in the pattern.
20, 26, 32, __, 44, 50

   ◉ **a. 38**

      Rationale: Correct.

   ○ **b.** 40

      Rationale: Try again. What are you counting by? Look at how one number differs from the next number to find the pattern. How does 20 differ from 26? How does 26 differ from 32?

   ○ **c.** 36

      Rationale: Try again. What are you counting by? Look at how one number differs from the next number to find the pattern. How does 20 differ from 26? How does 26 differ from 32?

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3. Write the ratio for the problem.
The soccer team has 20 players of men and women. There are 16 mean on the team. What is the ratio of women to the total players?

○ **a.** 16:20

> **Rationale:** Try again. Make sure you make the correct part-to-whole comparison. Compare the number of women to the total number of players.

◉ **b. 4:20**

> **Rationale:** Correct.

○ **c.** 20:4

> **Rationale:** Try again. Make sure you write the ratio in numbers in the same order as it is written in words. The correct order should be number of women compared to total number of players.

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4. Write the ratio for the problem.
   The science fair has 52 participants. 30 are girls and 22 are boys. What is the ratio of girls to boys?

◉ **a. 30:22**

> **Rationale:** Correct.

○ **b.** 30:52

> **Rationale:** This is a part-to-part relationship. Make sure you compare one part to another part. The parts you are comparing are number of girls to number of boys.

○ **c.** 22:30

> **Rationale:** Try again. Make sure you write the ratio in numbers in the same order as it is written in words. The correct order should be number of girls to number of boys.

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5. What is the better deal – three oranges for $1 or eight oranges for $2?
   Select the best rationale.

○ **a.** Three oranges for $1 is a better deal. $1 is less than $2.

> **Rationale:** Try again. Just because the dollar amount is less does not mean it's a better deal. The better deal is when you get more for your money.

b. **Eight oranges for $2 is a better deal. The unit rate is better.**

Rationale: Correct.

c. Neither one is a better deal. They are the same.

Rationale: Try again. Eight oranges for $2 is the same as four oranges for $1. Compare this to three oranges for $1.

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6. What is the better deal – three lift tickets for $18 or four lift tickets for $36? Select the best rationale.

a. **Three lift tickets for $18 is a better deal because the unit price is better.**

Rationale: Correct.

b. Four lift tickets for $36 is a better deal because you get more tickets.

Rationale: Try again. Just because you get more tickets doesn't mean it's a better deal. The better deal is when you get more for your money.

c. Neither one is a better deal. They are the same.

Rationale: Try again. Four lift tickets for $36 is the same as two tickets for $18. Compare this to three lift tickets for $18.

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7. What is the better deal – One concert ticket for $20 or two concert tickets for $40? Select the best rationale.

a. One concert ticket for $20 is a better deal because $20 is less than $40

Rationale: Try again. Just because the dollar amount is less does not mean it is a better deal. The better deal is when you get more for your money.

b. Two concert tickets for $40 is better because you get more tickets.

Rationale: Try again. Just because you get more tickets doesn't mean it's a better deal. The better deal is when you get more for your money.

c. **Neither one is a better deal. They are the same.**

Rationale: Correct.

8. Select the table that fits the algebraic pattern.
    n − 2

Box 1	Box 2	Box 3	Box 4	Box 5
	OO	OOOO	OOOOOO	OOOOOO OO

a

Box 1	Box 2	Box 3	Box 4	Box 5
O	OO	OOO	OOOO	OOOOO

b

Box 1	Box 2	Box 3	Box 4	Box 5
OOOOOO OO	OOOOOO	OOOO	OO	

c

○ **a.** Table 1

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should decrease by 2 each time. Which set of pictures shows this pattern?

○ **b.** Table 2

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should decrease by 2 each time. Which set of pictures shows this pattern?

◉ **c. Table 3**

Rationale: Correct.

9. Select the table that fits the algebraic pattern.
    n + 2

Box 1	Box 2	Box 3	Box 4	Box 5	
	OO	OOOO	OOOOOO	OOOOOO OO	a

Box 1	Box 2	Box 3	Box 4	Box 5	
O	OO	OOO	OOOO	OOOOO	b

Box 1	Box 2	Box 3	Box 4	Box 5	
OOOOOO OO	OOOOOO	OOOO	OO		c

a. **Table 1**

Rationale: Correct.

b. Table 2

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should increase by 2 each time. Which set of pictures shows this pattern?

c. Table 3

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should increase by 2 each time. Which set of pictures shows this pattern?

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10. Tell if the problem is (a) a proportion problem, (b) a best deal problem, or (c) a unit rate problem.

$$\frac{\text{Case of soda}}{\text{Cost}} \quad \frac{12}{\$5} \quad \frac{1}{x}$$

What is the cost for one can of soda?

a. a

Rationale: Try again. In this problem, you are comparing a quantity of 12 to a quantity of 1 to find a missing part. What type of problem involves a comparison to 1?

b. b.

Rationale: Try again. In this problem, you are comparing a quantity of 12 to a quantity of 1 to find a missing part. What type of problem involves a comparison to 1?

⊙ **c.** c

Rationale: Correct.

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11. What is the better value?

$$\frac{\text{Shirts}}{\text{Cost}} \quad \frac{2\ \text{Shirts}}{\$40} \quad \frac{4\ \text{Shirts}}{\$60}$$

What is the best deal?

○ **a.** a

Rationale: Try again. In this problem, you are not looking for any missing parts. You are just comparing one rate with another to find the best value. What type of problem is this?

⊙ **b.** b

Rationale: Correct.

○ **c.** c

Rationale: Try again. In this problem, you are not looking for any missing parts. You are just comparing one rate with another to find the best value. What type of problem is this?

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12. Match the pattern with the algebraic pattern.
n • 3

Box 1	Box 2	Box 3	Box 4	Box 5
OOOOO	OOOO	OOO	OO	O

a

Box 1	Box 2	Box 3	Box 4	Box 5
OOO	OOOOOO	OOOOOO OOO	OOOOOO OOOOOO	OOOOOO OOOOOO OOO

b

Box 1	Box 2	Box 3	Box 4	Box 5
OO	OOOO	OOOOOO	OOOOOO OO	OOOOOO OOOO

c

○ **a.** Table 1

    Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should triple each time. Which table shows this pattern?

⦿ **b. Table 2**

    Rationale: Correct.

○ **c.** Table 3

    Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of circles should triple each time. Which table shows this pattern?

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13. Match the pattern with the algebraic pattern given.
n + 2

Box 1	Box 2	Box 3	Box 4	Box 5
OOOOO	OOOO	OOO	OO	O

a

Box 1	Box 2	Box 3	Box 4	Box 5
OOO	OOOOOO	OOOOOO OOO	OOOOOO OOOOOO	OOOOOO OOOOOO OOO

b

Box 1	Box 2	Box 3	Box 4	Box 5
OO	OOOO	OOOOOO	OOOOOO OO	OOOOOO OOOO

c

○ **a.** a

    Rationale: Try again. Consider the relationship between the numbers to find the algebraic pattern.

○ **b.** b

    Rationale: Try again. Consider the relationship between the numbers to find the algebraic pattern.

◉ **c.** c

    Rationale: Correct.

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14. Select the visual pattern that matches the algebraic pattern.
n + 1

a

b

c

◉ **a.** **The circles**
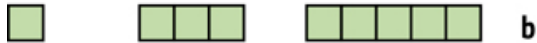
Rationale: Correct.

○ **b.** The squares

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of squares should increase by 1 each time. Which shape shows this pattern?

○ **c.** The triangles

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of triangles should increase by 1 each time. Which shape shows this pattern?

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15. Select the visual pattern that matches the algebraic pattern.

n • 2

⦿ **a.** **The circles**

Rationale: Correct.

○ **b.** The squares

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of squares should double each time. Which shape shows this pattern?

○ **c.** The triangles

Rationale: Try again. Consider the relationship between the pictures to find the pattern. The number of triangles should double each time. Which shape shows this pattern?