

سلسلة الطارق في الرياضيات: خاصية التوزيع



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ⇨ المناهج الإماراتية ⇨ الصف التاسع ⇨ رياضيات ⇨ الفصل الأول ⇨ ملفات متنوعة ⇨ الملف

تاريخ إضافة الملف على موقع المناهج: 2026-10-10 11:32:04

ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل
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المزيد من مادة
رياضيات:

إعداد: طارق علي

التواصل الاجتماعي بحسب الصف التاسع



صفحة المناهج
الإماراتية على
فيسبوك

المزيد من الملفات بحسب الصف التاسع والمادة رياضيات في الفصل الأول

اختبار القياس الدولي IBT متبوع بالإجابات	1
حل أوراق عمل الوحدة الثالثة الدوال الخطية	2
حل أوراق عمل الوحدة الثانية المعادلات الخطية	3
حل أوراق عمل الوحدة الأولى التعابير والمعادلات والدوال	4
التوزيع الزمني للخطة الفصلية الفصل الأول للعام 2022-2023	5

تحميل تطبيق المناهج للهواتف الذكية

تطبيق المناهج على Play Google (أندرويد)

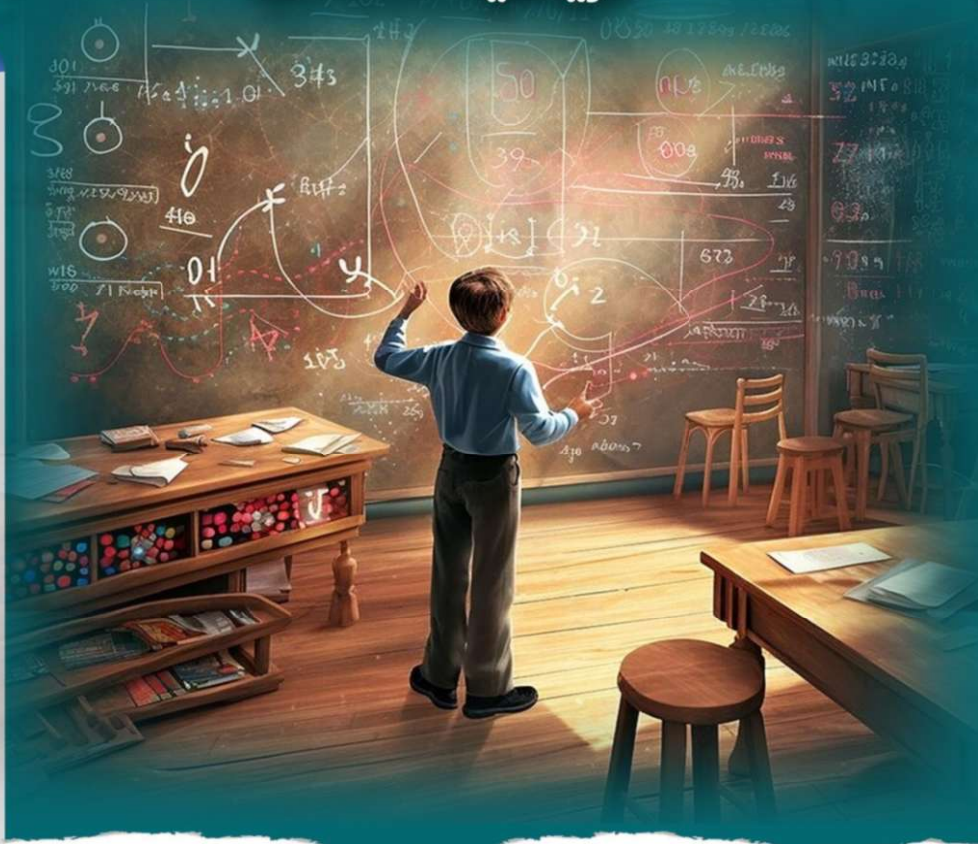
تطبيق المناهج على Store App (آبل)

الطارق

سلسلة

الرياضيات

1-4



منصة طارق أكاديمي للرياضيات

Tarek Academy

من ف تاسع (عام)

طارق

أستاذ الرياضيات

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Key Concept • Distributive Property

Symbols

For any numbers a , b , and c ,

$$a(b + c) = ab + ac \text{ and } (b + c)a = ba + ca \text{ and}$$

$$a(b - c) = ab - ac \text{ and } (b - c)a = ba - ca.$$

Examples

$$4(9 + 3) =$$

$$4(9) + 4(3) = 36 + 12 = 48$$

Check

SWIMMING Verdell's swim team practices 5 days a week. Each day they spend 15 minutes stretching, 45 minutes swimming laps, and 30 minutes lifting weights.

Part A Which expression(s) represent the number of minutes Verdell's team spends in practice each week? Select all that apply.

☒ A. $5(15 + 45 + 30)$

B. $5(15) + 45 + 30$

☒ C. $5(15) + 5(45) + 5(30)$

D. $5(15) + 5(45) + 30$

E. $5 + 15 + 45 + 30$

Part B How much time does Verdell's team spend in practice each week?

A. 90 minutes

B. 150 minutes

C. 330 minutes

☒ D. 450 minutes

$$5(15 + 45 + 30) = 450$$



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Example 2 Mental Math

* Use the Distributive Property to rewrite and evaluate each expression.

$$\begin{aligned} \text{a. } 5 \cdot 99 &= 5(100 - 1) \\ &= 5(100) - 5(1) \\ &= 500 - 5 = 495 \end{aligned}$$

$$\begin{aligned} \text{b. } 4 \cdot 1002 &= 4(1000 + 2) \\ &= 4(1000) + 4(2) \\ &= 4000 + 8 = 4008 \end{aligned}$$

Check قدر

Part A Estimate the value of the expression $7(51)$.

$7(\underline{50}) = \underline{350}$, so $7(51)$ will be a little more than 350.

$$\begin{aligned} * 7(50 + 1) &= 7(50) + 7(1) \\ &= 350 + 7 \\ &= \boxed{357} > 350 \end{aligned}$$

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Part B Which expression(s) use(s) the Distributive Property to rewrite and find the exact value of the expression $7(51)$?

- A. $51(7 - 3)$; 204 ☒ B. $7(50 + 1)$; 357 C. $51(7 + 3)$; 510
 D. $51(7) - 51(3)$; 204 ☒ E. $7(50) + 7(1)$; 357 F. $51(7) + 51(3)$; 510

$$7(50 + 1) = 7(50) + 7(1)$$

Example 3 Distribute an Algebraic Expression from the Left

Rewrite $4(5x - 7)$ using the Distributive Property. Then simplify.

$$4(5x) - 4(7) = 20x - 28$$

Check

Simplify the expression.

$$\begin{aligned} -6(r + 3g - t) &= -6r - 6(3g) - 6(-t) \\ &= -6r - 18g + 6t \end{aligned}$$

Example 4 Distribute an Algebraic Expression from the Right

Rewrite $(3y^2 + y - 8)6$ using the Distributive Property. Then simplify.

$$\begin{aligned} &= 6(3y^2) + 6y - 6(8) \\ &= 18y^2 + 6y - 48 \end{aligned}$$



Example 5 Combine Like Terms

Simplify each expression.

a. $14a + 18a = 32a$
 Same $\rightarrow$ like terms

b. $4b^2 + 9b - 3b$
 $4b^2 + 6b$

Check

Simplify the expression. If not possible, choose simplified.

$b^2 + 13b + 13$

No like terms $\Rightarrow$ Simplified

Example 6 Write and Simplify Expressions

Simplify the expression and indicate the properties used.

$3(2x + 3y) - 2(4x - y)$

$3(2x) + 3(3y) - 2(4x) - 2(-y) =$

$6x + 9y - 8x + 2y = -2x + 11y$



Check

Which expressions are equivalent to 4 times the sum of 2 times x and 6?

steps

• $8(x - 3)$

✓ $4(2x + 6)$

• $(4 + 2x)6$

• $4(2 + x + 6)$

* $4(2x + 6)$

✓ $8x + 24$

✓ $4(2x) + 4(6)$

$= 4(2x) + 4(6)$

$= 8x + 24$

Use the Distributive Property to rewrite each expression. Then evaluate.

Question 1: $(4 + 5)6$

✓ a) $(4 \times 6) + (5 \times 6)$

b) $(4 + 6) \times (5 + 6)$

c) $4 \times 6 + 5$

d) $4 + 5 \times 6$

Question 2: $7(13 + 12)$

a) $7 \times 13 + 12$

b) $7 + 13 \times 12$

c) $(7 + 13) \times (7 + 12)$

✓ d) $(7 \times 13) + (7 \times 12)$



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Question 3: $6(6 - 1)$

- a) $6 \times 6 - 1$
- ~~b) $(6 \times 6) - (6 \times 1)$~~
- c) $6 + 6 - 1$
- d) $6 \times 6 + 6 \times 1$

Question 4: $(3 + 8)15$

- ~~a) $3 \times 15 + 8 \times 15$~~
- b) $3 + 8 \times 15$
- c) $3 \times 15 + 8$
- d) $3 + 8 + 15$

Question 5: $14(8 - 5)$

- a) $14 \times 8 - 5$
- b) $14 + 8 - 5$
- ~~c) $(14 \times 8) - (14 \times 5)$~~
- d) $14 \times 8 + 14 \times 5$



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Question 6: $(9 - 4)19$

- ~~a) $(9 \times 19) - (4 \times 19)$~~
- b) $9 - 4 + 19$
- c) $9 - 4 \times 19$
- d) $(9 \times 19) - 4$

7. **OPERA** Aran's drama class is planning a field trip to see Mozart's famous opera *Don Giovanni*. Tickets cost \$39 each, and there are 23 students and 2 teachers going on the field trip.

a. Write an expression to find the group's total ticket cost.

$$39 (23 + 2)$$

b. What is the group's total ticket cost?

$$39 (23) + 39 (2) = 975$$

8. **SALARY** In a recent year, the median salary for an engineer in the United States was \$55,000 and the median salary for a computer programmer was \$52,000.

a. Write an expression to estimate the total cost for a business to employ an engineer and a programmer for 5 years.

outside → { each - Per - every - For }

$$5 (55000 + 52000)$$



- b. Estimate the total cost for a business to employ an engineer and a programmer for 5 years.

$$5(55000) + 5(52000) = 535000$$

9. **COSTUMES** Isabella's ballet class is performing a spring recital for which they need butterfly costumes. Each butterfly costume is made from $3\frac{3}{5}$ yards of fabric.

- a. Write an expression to find the number of yards of fabric needed for 10 costumes.

$$10 \left(3\frac{3}{5} \right) \text{ or } 3\frac{3}{5} (10)$$

- b. Use the Distributive Property to find the number of yards of fabric needed for 10 costumes. Show your work. (Hint: A mixed number can be written as the sum of an integer and a fraction.)

$$10 \left(3 + \frac{3}{5} \right) = 10(3) + 10 \left(\frac{3}{5} \right) \\ = 30 + 6 = \boxed{36}$$

10. **REASONING** Letisha and Noelle each opened a checking account, a savings account, and a college fund. The chart shows the amounts that they deposit into each account every month.

	Checking	Savings	College
Letisha	\$125	\$75	\$50
Noelle	\$250	\$50	\$50

- a. Write an expression to find the amount in Letisha's checking, savings, and college accounts after 12 months.

$$12(125 + 75 + 50)$$



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- b. How much is in Letisha's checking, savings, and college accounts after 12 months?

3000

Use the Distributive Property to rewrite and evaluate each expression.

11. $7 \cdot 497$

$$7(500 - 3) =$$

$$7(500) - 7(3)$$

$$= 3479$$

12. $6(525)$

$$6(500 + 25) =$$

$$6(500) + 6(25)$$

$$= 3150$$

13. $36 \cdot 3\frac{1}{4}$

$$36(3 + \frac{1}{4}) = 36(3) + 36(\frac{1}{4}) = 117$$

17. $15 \cdot 104$

$$15(100 + 4) =$$

$$15(100) + 15(4) =$$

$$1500 + 60 = 1560$$

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Mr. Tarek Ali

سلسلة الطارق في الرياضيات منصة طارق أكاديمي

9

علم



استاذ طارق علي

في الرياضيات



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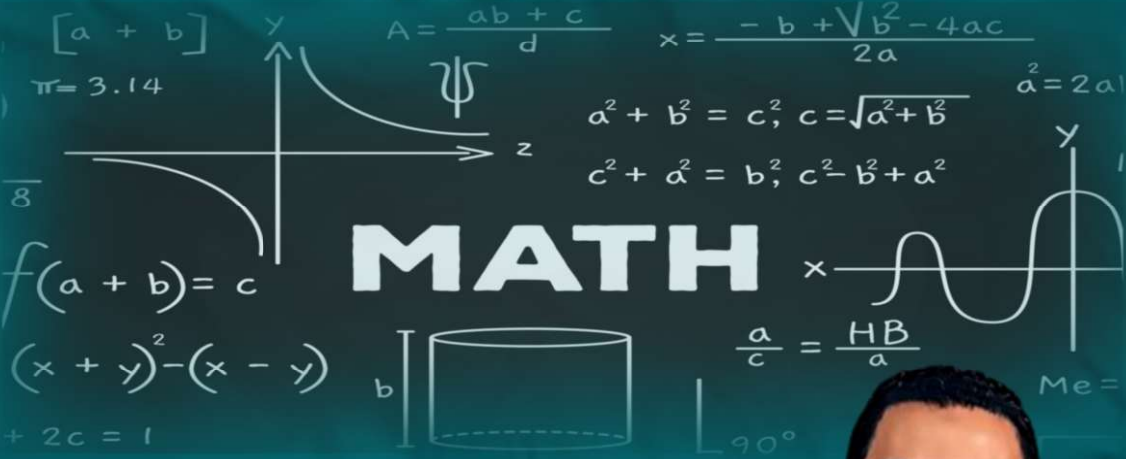
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IN

Math



خاص بالمنصة



خاص بجميع الجروبات و القنوات



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