

جداول العلاقات التناسبية



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ⇨ المناهج الإماراتية ⇨ الصف العاشر العام ⇨ رياضيات ⇨ الفصل الأول ⇨ ملفات متنوعة ⇨ الملف

تاريخ إضافة الملف على موقع المناهج: 2026-10-10 11:30:38

ملفات اكتب للمعلم اكتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل
منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي للمدرس

المزيد من مادة
رياضيات:

إعداد: طارق علي

التواصل الاجتماعي بحسب الصف العاشر العام



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف العاشر العام والمادة رياضيات في الفصل الأول

تحليل وتفكيك كثيرات الحدود: الفرق بين مربعين والمربع الكامل

1

اختبار الوحدة الأولى التعابير والمعادلات التربيعية

2

اختبار الوحدة الثانية: الأسس والتعابير الجذرية

3

حل تجميعية أسئلة مراجعة وفق الهيكل الوزاري الجديد منهج بريدج

4

تجميعية أسئلة مراجعة وفق الهيكل الوزاري الجديد منهج بريدج

5

تحميل تطبيق المناهج للهواتف الذكية

تطبيق المناهج على Play Google (أندرويد)

تطبيق المناهج على Store App (آبل)

الطارق

سلسلة

الرياضيات

1-3 Tables of Proportional Relationships

منطقة طارق أكاديمي للرياضيات

Tarek Academy

مرفق ف السابع (عام ريفيل)

طارق

أستاذ الرياضيات

0562854282 037637703

Mr. Tarek Ali

سلسلة الطرق في الرياضيات

Grade

7

Reveal



Per - each - every =

Price/cost
numbers

Number of Pizzas	1	2	3	4
Cost (\$)	7	14	21	28
Cost per Pizza (\$)	7	7	7	7

* Proportional :

when ratios are same or =

$$\frac{7}{1} = 7, \quad \frac{14}{2} = 7, \quad \frac{21}{3} = 7, \quad \frac{28}{4} = 7$$

Number of Pizzas	1	2	3	4
Cost (\$)	9	16	23	30
Cost per Pizza (\$)	9	8	7.67	7.50

$$* \frac{\text{Cost}}{N} = \frac{9}{1} = 9, \quad \frac{16}{2} = 8$$

$$9 \neq 8$$

Non - proportional.

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Reveal

Example 1 Proportional Relationships and Tables

Carrie earns \$8.50 per hour babysitting.

Is the amount of money she earns proportional to the number of hours she spends babysitting?

Complete the table with the amount of money she earns for babysitting 1, 2, 3, and 4 hours.

Number of Hours	1	2	3	4
Amount Earned (\$)	8.50	17	25.50	34

$$8.50 \times 2 = 17$$

$$8.50 \times 4 = 34$$

$$8.50 \times 3 = 25.50$$

$$\begin{array}{r} 8.50 \\ \times 4 \\ \hline 34.00 \end{array}$$

Check

An adult elephant drinks about 225 liters of water each day. Is the amount of water proportional to the number of days that have passed? Use the table provided to help answer the question.

Time (days)	1	2	3	4
Water (L)	225	450	675	900

$$\frac{\text{water}}{\text{day}} = \frac{225}{1} = 225, \quad \frac{450}{2} = 225$$

$$\frac{675}{3} = 225, \quad \frac{900}{4} = 225$$

yes proportional.



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Example 2 Proportional Relationships and Tables

$$6 + 25 = 31$$

A ticket agency charges a \$6 service fee on any order. Each ticket for a concert costs \$25.

each time add 25

Is the cost of an order proportional to the number of tickets ordered?

The table shows the relationship between the total cost of an order and the number of tickets ordered.

Number of Tickets	1	2	3	4
Total Cost of Order (\$)	31	56	81	106

$$\begin{array}{r} 26 \\ 2 \overline{)56} \\ \underline{-46} \\ 16 \\ \underline{-16} \\ 00 \end{array}$$

$$31 + 25 = 56$$

$$56 + 25 = 81$$

$$\frac{\text{cost}}{T} = \frac{31}{1} = 31$$

$$\frac{56}{2} = 28$$

non-proportional.

Check

The table shows how long it took Maria to run laps around the school track. Is the number of laps she ran proportional to the time it took her? Explain.

Laps	2	4	6
Time (s)	150	320	580

$$\frac{\text{laps}}{\text{time}} = \frac{2}{150} = \frac{2 \times 1}{2 \times 75} = \frac{1}{75}$$

$$* \frac{4}{320} = \frac{4 \times 1}{4 \times 80} = \frac{1}{80}$$

non proportional



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Learn Identify the Constant of Proportionality

You have learned that two quantities are proportional if the ratios comparing them are equivalent or constant. The constant ratio is called the **constant of proportionality**. The constant of proportionality has the same value as the unit rate.

Creators of a stop motion animation can film 24 frames per second. The table shows the number of frames captured over 1, 2, 3, and 4 seconds.

Number of Seconds	1	2	3	4
Number of Frames	24	48	72	96

What is the constant of proportionality? $\frac{24}{1} = 24$

What is the unit rate? 24 Frame per Second

Example 3 Identify the Constant of Proportionality

The winner of a jump rope competition jumped 124 times in 20 seconds and 186 times in 30 seconds.

What is the constant of proportionality?

$$\frac{\text{Times}}{\text{Second}} = \frac{124}{20} = \frac{12.4}{2} = 6.2$$

Constant of proportionality = 6.2



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Check

The cost of a birthday party at a skating rink is proportional to the number of guests. The skating rink charges \$82.50 for 10 guests.

The choices show the number of guests and the total cost for four different parties that were hosted at different locations. Select each party that was hosted with the same constant of proportionality, or unit rate, as the skating rink's unit rate.

☒ 12 guests for \$99.00

☐ 8 guests for \$52.00

☐ 15 guests for \$97.50

☒ 6 guests for \$49.50

$$\frac{82.50}{10} = 8.25$$

$$\frac{99}{12} = 8.25$$

$$\frac{52}{8} = 6.50$$

$$\frac{97.50}{15} = 6.50$$

$$\frac{49.50}{6} = 8.25$$

Example 4 Identify the Constant of Proportionality

After a volcanic eruption, lava flows down the slopes of the volcano. The distance the lava flows is proportional to the time.

Time (min)	Distance (m)
5	9
10	18
15	27
20	36

What is the constant of proportionality of the flow of lava?



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Reveal



Time (min)	Distance (m)
5	9
10	18
15	27
20	36

$$\frac{\text{distance}}{\text{time}} = \frac{18}{10} = 1.8$$

constant of proportionality
is 1.8

to find constant of proportionality

divided second value over first value

$$\frac{\text{Cost}}{N}$$

or

$$\frac{\text{Distance}}{\text{Time}}$$

Check

The tables show the amount that three friends earn during a bake sale. Write the correct unit rate that each friend earned in the spaces provided.

Allie

Earnings (\$)	17.00	34.00	51.00
Time (h)	1	2	3

$$\frac{\text{Cost \$}}{h} = \frac{17}{1} = 17 \text{ \$ / h}$$



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Ben

$$\frac{\$}{h} = \frac{9}{0.75}$$

Earnings (\$)	9.00	18.00	27.00
Time (h)	0.75	1.5	2.25

$$9 \div \frac{3}{4} \text{ kcf} \Rightarrow 9 \times \frac{4}{3} = \frac{3 \times \cancel{3} \times 4}{\cancel{3}} = 12 \$/h$$

Sri

Earnings (\$)	40.00	80.00	120.00
Time (h)	2.5	5	7.5

$$\frac{\$}{h} = \frac{80}{5} = \frac{10 \times 8}{5} = \frac{2 \times \cancel{5} \times 8}{\cancel{5}} = 16$$

16 \$/h

استاذ
طارق علي
في الرياضيات

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Reveal



Practice

Go Online You can complete your homework online.

For each situation, complete the table given. Does the situation represent a proportional relationship? Explain.

1. The cost of a school lunch is \$2.50. (Example 1)

Lunches Bought	1	2	3	4
Total Cost (\$)				

2. Anna walks her dog at a constant rate of 12 blocks in 8 minutes. (Example 1)

Number of Blocks	12	24	36	48
Number of Minutes				

3. Fun Center rents popcorn machines for \$20 per hour. In addition to the hourly charge, there is a rental fee of \$35. (Example 2)

Hours	1	2	3	4
Cost (\$)				

4. Jean has \$280 in her savings account. Starting next week, she will deposit \$30 in her account every week. (Example 2)

Weeks	1	2	3	4
Savings (\$)				

5. Rocko paid \$12.50 for 25 game tickets. Louisa paid \$17.50 for 35 game tickets. What is the constant of proportionality? (Example 3)

6. A baker, in 70 minutes, iced 40 cupcakes and, in 49 minutes, iced 28 cupcakes. What is the constant of proportionality? (Example 3)

7. The table shows the amount of dietary fiber in bananas. Use the table to find the constant of proportionality. (Example 4)

Dietary Fiber (g)	9.3	18.6	27.9	37.2
Bananas	3	6	9	12

Test Practice

8. **Open Response** The table shows the distance traveled by a runner. Use the table to find the constant of proportionality.

Distance (mi)	4.55	13.65	22.75	31.85
Time (h)	0.5	1.5	2.5	3.5



منصة طارق أكاديمي للرياضيات

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IN

Math

$\pi = 3.14$

$A = \frac{ab + c}{d}$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$a^2 + b^2 = c^2, c = \sqrt{a^2 + b^2}$

$c^2 + a^2 = b^2, c^2 = b^2 + a^2$

$a^2 = 2a$

$f(a + b) = c$

$(x + y)^2 - (x - y)$

$+ 2c = 1$

MATH

$\frac{a}{c} = \frac{HB}{a}$

$Me =$

خاص بالمنصة



خاص بجميع الجروبات و القنوات



استاذ / طارق علي