للصف السادس

بموضوع

النسبة المئوية

%

**تحضير: هشام العطاونة**النسبة المئوية

النسبة المئوية هي طريقة أخرى للتعبير عن كسور مقاماتها 100

اشارة النسبة المئوية هي % ( الاشارة بدل المقام 100 أي %3 = .

مثال:-

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 |
| 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 |
| 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 |
| ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | 🖉 |
| ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | 🖉 |
| ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | 🖉 |
| ✄ | ✄ | ✄ | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |
| ✄ | ✄ | ✄ | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |
| ✄ | ✄ | ✄ | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |
| ✄ | ✄ | ✄ | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |

يظهر في الشكل مربع كبير مكون من 100 مربع صغير.

أكمل الجدول الآتي:-

|  |  |  |  |
| --- | --- | --- | --- |
| الشكل | عدد الأشكال | الكسر العادي | النسبة المئوية |
| ✄ |  |  |  |
| 🖉 |  |  |  |
| ☺ |  |  |  |
| 🏵 |  |  |  |

* ما هو المشترك لهذه الكسور؟----------------
* ما هو مجموع كل الأشكال في الجدول؟----------------

مثال2:- أكمل الجدول الآتي:-

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 🏵 | 🏵 |  | 🏵 | 🏵 | 🏵 |  |  |  | 🏵 |
| 🏵 | 🏵 |  | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 |
| 🏵 | 🏵 |  | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 | 🏵 |
| ☺ | ☺ |  | ☺ | ☺ |  |  |  |  |  |
| ☺ | ☺ |  | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | 🖉 |
| ☺ | ☺ |  | ☺ | ☺ | ☺ | ☺ | ☺ | ☺ | 🖉 |
| ✄ | ✄ |  | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |
| ✄ | ✄ |  | ✄ | ✄ | ✄ |  |  |  |  |
| ✄ | ✄ |  | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |
| ✄ | ✄ | ✄ | ✄ | ✄ | ✄ | 🖉 | 🖉 | 🖉 | 🖉 |

|  |  |  |  |
| --- | --- | --- | --- |
| الشكل | الجزء الملون | الكسر العادي | النسبة المئوية |
| ✄ |  |  |  |
| 🖉 |  |  |  |
| ☺ |  |  |  |
| 🏵 |  |  |  |

-ما هو مجموع الأجزاء الملونة (المربعات المليئة) في المربع الكبير؟

- ما هو مجموع الأجزاء البيضاء(المربعات الفارغة ) في المربع الكبير؟

|  |  |  |  |
| --- | --- | --- | --- |
| الجزء الملون | | الجزء الغير ملون | |
| كسر عادي | نسبة مئوية | كسر عادي | نسبة مئوية |
|  |  |  |  |

الجزء الملون + الجزء الأبيض =  = %\_\_\_\_\_\_

لون في الشكل النسبة المئوية المكتوبة:-

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |



%50

%35

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

%17

%9

أكتب الجزء الملون بكسر عادي ونسبة مئوية

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  | 🕭 |  |  |  |  |  | | 🕭 | 🕭 |  |  |  |  |  |  |  |  | |  |  |  |  | 🕭 |  |  |  |  | 🕭 | |  |  |  |  |  |  |  |  |  |  | |  |  |  | 🕭 |  | 🕭 |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  | 🕭 |  |  |  | 🕭 |  | 🕭 |  | |  |  |  |  |  |  |  | 🕭 |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |

تحويل الكسر العادي الى نسبة مئوية

1. نحول كل كسر عادي الى كسر مقامه 100 وذلك من حلال عمليتي التوسيع والاختزال.

%75 =  = × = 

عامل التوسيع 25

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%140=  = × = 

عامل التوسيع 20

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%14 =  =  = 

عامل الاختزال 3

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

%0.5 =  = = 

عامل الاختزال 2

تحويل النسبة المئوية الى كسر عادي

تحويل النسبة المئوية الى كسر مقامه 100 نستعين بعملية التوسيع أو الاختزال للحصول على كسر عادي.

 = = = 40%

 = = = == 350%

تذكر:-

20%

أكتب كل كسر كنسبة مئوية:-

25%











75%

10%

1%

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

أكتب كل نسبة مئوية ككسر عادي وكسر عشري:-

|  |  |  |
| --- | --- | --- |
| نسبة مئوية | كسر عادي | كسر عشري |
| %89 |  |  |
| %23 |  |  |
| %6 |  |  |
| %47 |  |  |
| %81 |  |  |
| %27 |  |  |
| %2 |  |  |
| %18 |  |  |
| %36 |  |  |