Evaluating Risk:
Are bacon sandwiches bad for you?

Interpreting Graphs Route: Answers to worksheets

What does an extra 20% risk on top of a 5% risk really mean?

1. 5
2. 3
3. 7
4. $\frac{5}{100}=\frac{1}{20}$; $\frac{3}{60}=\frac{1}{20}$; $\frac{7}{140}=\frac{1}{20}$; $\frac{1}{20}$
5. 20
6. 2
7. 5
8. $\frac{20}{100}=\frac{1}{5}$; $\frac{2}{10}=\frac{1}{5}$; $\frac{5}{25}=\frac{1}{5}$; $\frac{1}{5}$
9. 20% of 5 = 1, total cases = 5 + 1 = 6

   20% of 3 = $\frac{3}{5}=0.6$, total cases = 3 + 0.6 = 3.6, so (3 or) 4

   20% of 7 = $\frac{7}{5}=1.4$, total cases = 7 + 1.4 = 8.4, so 8 (or 9)

   20% of 5% = $\frac{20}{100}\times\frac{5}{100}=\frac{1}{100}=0.01=1\%$

   (or start by observing that the additional number of cases is 1%)

The Journey to School

1. Bar graph
2. 12
3. 4
6. Even for 12 year-olds, the risk of an accident is less than 0.1% or less than 1 child in 1000 at each year of age, and the figures are for all accidents, which includes minor ones - so the risk is pretty small.
7. 12, the difference is 93 (365 compared to 272).
8. 14, the difference is 3 (214 compared to 211).
9. 16 (101 compared to 95).
12. Pie chart
13. Bus/tram
14. Walking
15. No indication of total number of children using each mode of transport so no sense of what proportion of children using a given mode are at risk. In fact, walking is pretty safe, more so than cycling, for instance - considerably more children walk than cycle.

http://motivate.maths.org/content/MathsHealth/Risk/
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