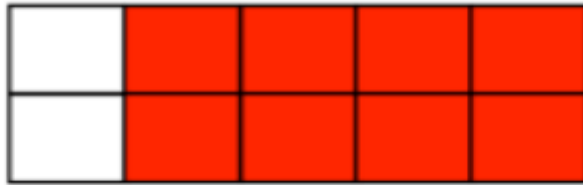


May 14th

5-a-day

Numeracy



What fraction of the grid is shaded?
Simplify your answer.

$$\frac{8}{10} = \frac{4}{5}$$

Max runs seven miles every morning. How many days will it take him to cover 441 miles?

$$441 \div 7$$

$$\begin{array}{r} 063 \\ 7 \overline{) 441} \\ \underline{42} \\ 21 \\ \underline{21} \\ 0 \end{array}$$

63 days

$\frac{2}{7}$ of 84 miles

$$84 \div 7 = 12$$

$$12 \times 2 = 24$$

 $3.4 \div 4$

$$\begin{array}{r} 0.85 \\ 4 \overline{) 3.40} \\ \underline{32} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

 $7.2 \div 5$

$$\begin{array}{r} 1.44 \\ 5 \overline{) 7.20} \\ \underline{5} \\ 22 \\ \underline{20} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

Increase £40 by 30%

$$\begin{aligned} 10\% &= \pounds 4 \\ 30\% &= \pounds 12 \quad \pounds 52 \end{aligned}$$

Decrease £260 by 5%

$$\begin{aligned} 10\% &= \pounds 26 \\ 5\% &= \pounds 13 \end{aligned}$$

$$\pounds 247$$

Make w the subject of

$$w + y = a$$

$$w = a - y$$

Pattern 1



1

Pattern 2



5

Pattern 3



9

Draw Pattern 4 below



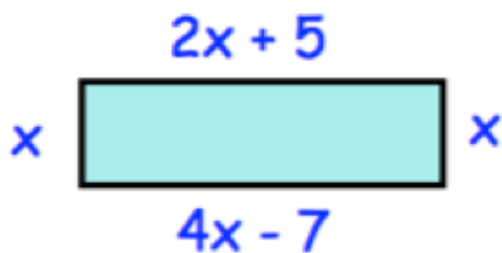
13

How many squares will be in pattern 6?

6th

$$3^{\text{th}} - 17$$

$$6^{\text{th}} - \underline{21}$$



Write an expression for the number of squares in pattern n

$$\begin{matrix} 1 & 5 & 9 & 13 \\ 4n & 8 & 12 & 16 \end{matrix}$$

$$4n - 3$$

Find the value of x.

$$4x - 7 = 2x + 5$$

$$2x = 12$$

$$x = 6$$

Find the perimeter of the rectangle

17

6

6

17

$$6 + 6 + 17 + 17$$

$$46\text{cm}$$

May 14

5-a-day

Higher

The population of foxes in a wood increased, over a year by 15%.

The population is now 4830.

What was the population of foxes before the increase?

$$115\% = 4830$$

$$1\% = 42$$

$$100\% = 4200$$

Convert 0.55555... into a fraction

$$\frac{5}{9}$$

Convert 0.8202020... into a fraction

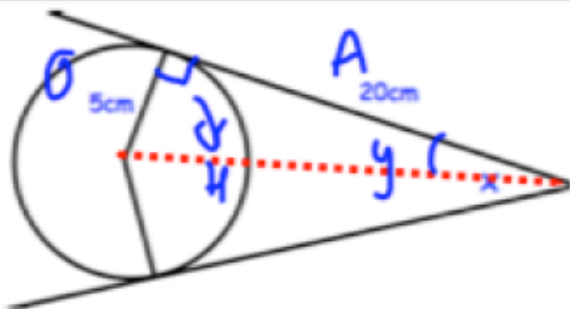
$$x = 0.82020\dots$$

$$10x = 8.20202\dots$$

$$1000x = 820.2020\dots$$

$$990x = 812$$

$$x = \frac{406}{495}$$

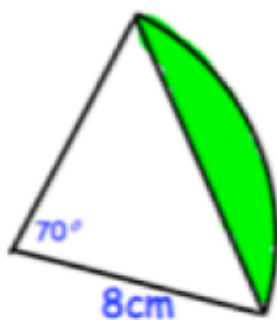


Calculate angle x

$$\tan y = \frac{5}{20} \quad y = 14.036\dots$$

$$x = 2 \times 14.036\dots$$

$$x = 28.07^\circ$$



Calculate the area of the segment

sector

$$\frac{70}{360} \times \pi \times 8^2 = 39.095\dots$$

$$\text{triangle} = \frac{1}{2} \times 8 \times 8 \times \sin 70 = 30.07\dots$$

$$39.095\dots - 30.07\dots = 9.02\text{cm}^2$$