

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****I Do**

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John plants 720 bulbs in a garden.

He plants tulip bulbs, crocus bulbs and daffodil bulbs so that

number of tulip bulbs : number of crocus bulbs : number of daffodil bulbs = 7 : 3 : 2

- 40% of the tulip bulbs are for yellow flowers.
- $\frac{2}{3}$  of the crocus bulbs are for yellow flowers.
- $\frac{3}{4}$  of the daffodil bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****We Do**

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Katie plants 540 bulbs in a garden.

She plants tulip bulbs, crocus bulbs and daffodil bulbs so that

number of tulip bulbs : number of crocus bulbs : number of daffodil bulbs = 5 : 3 : 1

- 60% of the tulip bulbs are for yellow flowers.
- $\frac{1}{3}$  of the crocus bulbs are for yellow flowers.
- $\frac{3}{4}$  of the daffodil bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 1**

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Tom plants 900 bulbs in a garden.

He plants tulip bulbs, crocus bulbs and daffodil bulbs so that

number of tulip bulbs : number of crocus bulbs : number of daffodil bulbs = 8 : 4 : 3

- 45% of the tulip bulbs are for yellow flowers.
- $\frac{3}{4}$  of the crocus bulbs are for yellow flowers.
- $\frac{2}{3}$  of the daffodil bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 2**

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Emily plants 480 bulbs in a garden.

She plants tulip bulbs, crocus bulbs and daffodil bulbs so that

number of tulip bulbs : number of crocus bulbs : number of daffodil bulbs = 5 : 2 : 1

- 30% of the tulip bulbs are for yellow flowers.
- $\frac{1}{2}$  of the crocus bulbs are for yellow flowers.
- $\frac{3}{4}$  of the daffodil bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 1**

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Anna plants 1200 bulbs in a garden.

She plants tulip bulbs, crocus bulbs, daffodil bulbs and hyacinth bulbs so that

tulip : crocus : daffodil : hyacinth = 7 : 5 : 2 : 1

- 20% of the tulip bulbs are for yellow flowers.
- $\frac{3}{5}$  of the crocus bulbs are for yellow flowers.
- $\frac{1}{2}$  of the daffodil bulbs are for yellow flowers.
- 80% of the hyacinth bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

**RATIO, FRACTIONS & PERCENTAGES: COMBINED PROBLEM****Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 2**

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Mark plants 1050 bulbs in a garden.

He plants tulip bulbs, crocus bulbs, daffodil bulbs and hyacinth bulbs so that

tulip : crocus : daffodil : hyacinth = 9 : 4 : 2 : 5

- 50% of the tulip bulbs are for yellow flowers.
- $\frac{3}{4}$  of the crocus bulbs are for yellow flowers.
- $\frac{1}{2}$  of the daffodil bulbs are for yellow flowers.
- 40% of the hyacinth bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

Answer = .....

## **Answers & Worked Solutions**

### **I Do:**

Total parts =  $7 + 3 + 2 = 12$  parts.

1 part =  $720 \div 12 = 60$ .

Tulips =  $7 \times 60 = 420$ . Yellow tulips = 40% of 420 = 168.

Crocuses =  $3 \times 60 = 180$ . Yellow crocuses =  $(2/3)$  of 180 = 120.

Daffodils =  $2 \times 60 = 120$ . Yellow daffodils =  $(3/4)$  of 120 = 90.

Total yellow bulbs =  $168 + 120 + 90 = \mathbf{378}$

### **We Do:**

Total parts =  $5 + 3 + 1 = 9$  parts.

1 part =  $540 \div 9 = 60$ .

Tulips =  $5 \times 60 = 300$ . Yellow tulips = 60% of 300 = 180.

Crocuses =  $3 \times 60 = 180$ . Yellow crocuses =  $(1/3)$  of 180 = 60.

Daffodils =  $1 \times 60 = 60$ . Yellow daffodils =  $(3/4)$  of 60 = 45.

Total yellow bulbs =  $180 + 60 + 45 = \mathbf{285}$

### **You Do 1:**

Total parts =  $8 + 4 + 3 = 15$  parts.

1 part =  $900 \div 15 = 60$ .

Tulips =  $8 \times 60 = 480$ . Yellow tulips = 45% of 480 = 216.

Crocuses =  $4 \times 60 = 240$ . Yellow crocuses =  $(3/4)$  of 240 = 180.

Daffodils =  $3 \times 60 = 180$ . Yellow daffodils =  $(2/3)$  of 180 = 120.

Total yellow bulbs =  $216 + 180 + 120 = \mathbf{516}$

### **You Do 2:**

Total parts =  $5 + 2 + 1 = 8$  parts.

1 part =  $480 \div 8 = 60$ .

Tulips =  $5 \times 60 = 300$ . Yellow tulips = 30% of 300 = 90.

Crocuses =  $2 \times 60 = 120$ . Yellow crocuses =  $(1/2)$  of 120 = 60.

Daffodils =  $1 \times 60 = 60$ . Yellow daffodils =  $(3/4)$  of 60 = 45.

Total yellow bulbs =  $90 + 60 + 45 = \mathbf{195}$

**Challenge 1:**

Total parts =  $7 + 5 + 2 + 1 = 15$  parts.

1 part =  $1200 \div 15 = 80$ .

Tulips =  $7 \times 80 = 560$ . Yellow = 20% of 560 = 112.

Crocuses =  $5 \times 80 = 400$ . Yellow =  $(3/5)$  of 400 = 240.

Daffodils =  $2 \times 80 = 160$ . Yellow =  $(1/2)$  of 160 = 80.

Hyacinths =  $1 \times 80 = 80$ . Yellow = 80% of 80 = 64.

Total yellow bulbs =  $112 + 240 + 80 + 64 = \mathbf{496}$

**Challenge 2:**

Total parts =  $9 + 4 + 2 + 5 = 20$  parts.

1 part =  $1050 \div 20 = 52.5$ .

Tulips =  $9 \times 52.5 = 472.5$ . Yellow = 50% of 472.5 = 236.25.

Crocuses =  $4 \times 52.5 = 210$ . Yellow =  $(3/4)$  of 210 = 157.5.

Daffodils =  $2 \times 52.5 = 105$ . Yellow =  $(1/2)$  of 105 = 52.5.

Hyacinths =  $5 \times 52.5 = 262.5$ . Yellow = 40% of 262.5 = 105.

Total yellow bulbs =  $236.25 + 157.5 + 52.5 + 105 = \mathbf{551.25}$