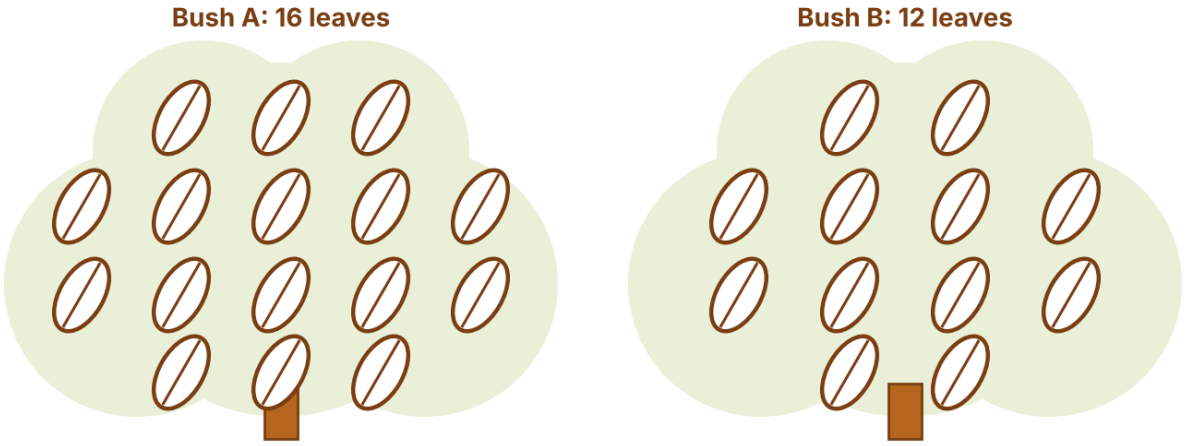
The Fall Fair Fraction Challenge

Compare fractions, colour fractions of a set, fraction of a number (Grades 5–6)

1. Two bushes

Bush A has 16 leaves. Colour **5/16** of its leaves **red** and **4/16** of its leaves **yellow**.

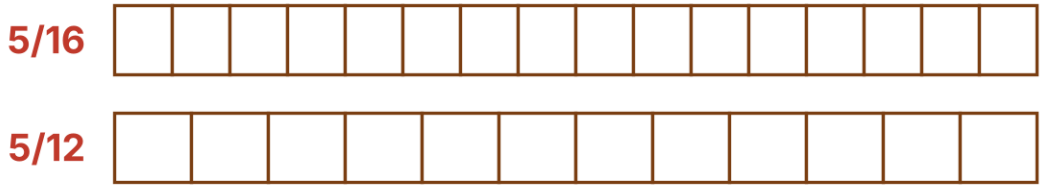
Bush B has 12 leaves. Colour **5/12** of its leaves **red** and **3/12** of its leaves **yellow**.



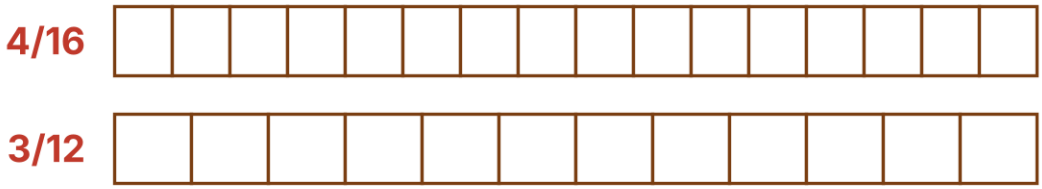
a) Red leaves on Bush A: ____ Red leaves on Bush B: ____ More red leaves: Bush ____

b) Yellow leaves on Bush A: ____ Yellow leaves on Bush B: ____ More yellow leaves: Bush ____

Now look at the strips. Both strips are the same length. The top one is cut into 16 parts, the bottom one into 12. Colour 5 parts of each. Which coloured part is longer?



Colour 4 parts of the top strip and 3 parts of the bottom strip. What do you notice?



c) Write <, > or =: **5/16 ____ 5/12** **4/16 ____ 3/12** **8/16 ____ 6/12**

10/16 ____ 9/12 **2/16 ____ 2/12** **12/16 ____ 9/12**

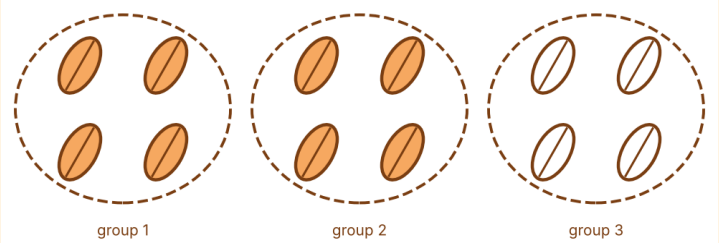
d) Same top number, different bottom number. Finish the rule: the bigger the bottom number, the _____ the fraction.

2. The squirrel's pantry

How to colour a fraction of a set. Example: colour **2/3** of 12 leaves.

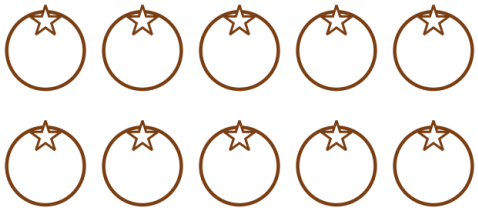
Step 1: the bottom number is 3, so split the 12 leaves into 3 equal groups: 12 ÷ 3 = 4 leaves in each group. Draw a loop around each group.

Step 2: the top number is 2, so colour 2 of the groups. That is 2 × 4 = 8 leaves. So **2/3** of 12 = 8.



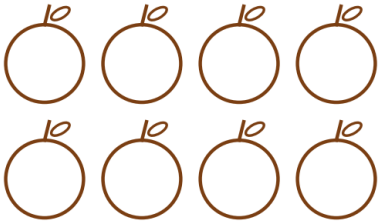
Now you try. Draw loops to make equal groups (as many groups as the bottom number), then colour the groups (as many as the top number). Fill in the blanks.

1. Colour **3/5** of the 10 tomatoes.



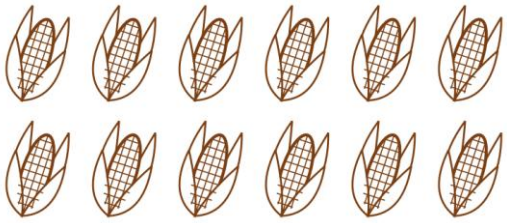
Groups: ___ In each group: ___ Coloured: ___

2. Colour **3/4** of the 8 apples.



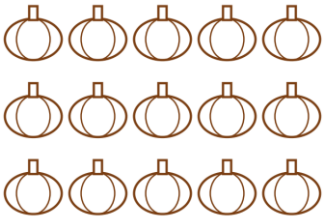
Groups: ___ In each group: ___ Coloured: ___

3. Colour **2/3** of the 12 corn cobs.



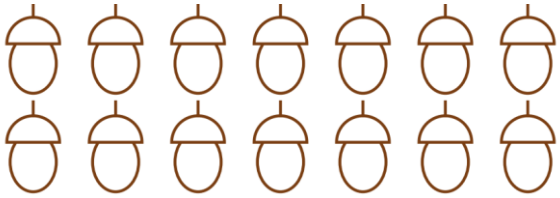
Groups: ___ In each group: ___ Coloured: ___

4. Colour **2/5** of the 15 pumpkins.



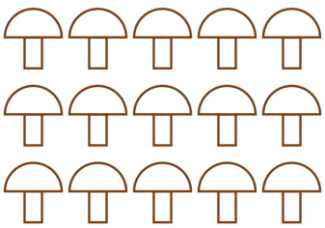
Groups: ___ In each group: ___ Coloured: ___

5. Colour **5/7** of the 14 acorns.



Groups: ___ In each group: ___ Coloured: ___

6. Colour **2/3** of the 15 mushrooms.

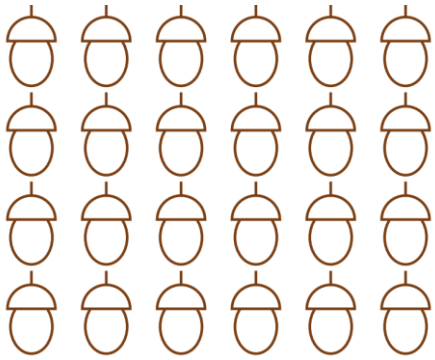


Groups: ___ In each group: ___ Coloured: ___

3. Two fractions of one set

Two fractions share one set. Find each part, colour them in two colours, and work out what is left. Then check your answer by writing both fractions with the same bottom number.

1. Of the 24 acorns, **3/8** are for squirrel and **1/4** for chipmunk. Colour squirrel's brown and chipmunk's orange. What fraction is left for blue jay?



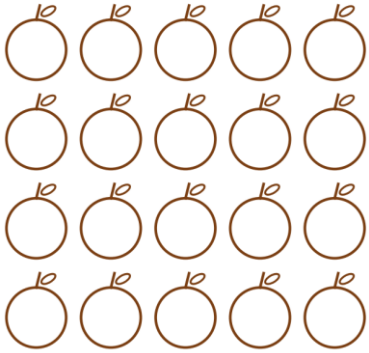
3/8 of 24 = _____

1/4 of 24 = _____

Coloured together: _____

Left: _____ of 24 = ____ / 24

2. Of the 20 apples, **2/5** are for pie and **1/4** for juice. Colour pie's red and juice's green. What fraction is left for the fruit bowl?



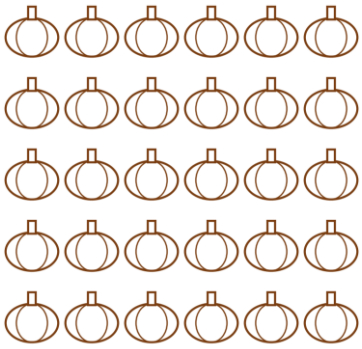
2/5 of 20 = _____

1/4 of 20 = _____

Coloured together: _____

Left: _____ of 20 = ____ / 20

3. Of the 30 pumpkins, **1/5** are for soup and **2/3** for the market. Colour soup's orange and the market's yellow. What fraction is left for the front porch?



1/5 of 30 = _____

2/3 of 30 = _____

Coloured together: _____

Left: _____ of 30 = ____ / 30

4. Fall fair word problems: What falls in autumn but never gets hurt?

Solve each problem. Find the answer number in the code table and write its letter. Then copy the letters, in order, into the boxes. The smiley marks the space between words.

1. A pumpkin pie is cut into 8 slices. 3/8 of the pie is eaten. How many slices are eaten? **Answer: _____ slices** **Letter: ____**	**2.** The hayride takes 45 minutes. 2/3 of the ride is done. How many minutes have gone by? **Answer: _____ min** **Letter: ____**	**3.** The farm stand had 36 cobs of corn. By noon 5/9 were sold. How many cobs were sold? **Answer: _____ cobs** **Letter: ____**
4. A pie costs $24. Today it is 1/4 off. How many dollars do you save? **Answer: _____ $** **Letter: ____**	**5.** A maple tree had 50 leaves. 2/5 of them fell this week. How many leaves fell? **Answer: _____ leaves** **Letter: ____**	**6.** A bag holds 27 apples. 2/3 of them are red. How many red apples? **Answer: _____ apples** **Letter: ____**
7. 16 kids came to the corn maze. 3/4 of them wore rubber boots. How many wore boots? **Answer: _____ kids** **Letter: ____**	**8.** A jug holds 32 cups of cider. 5/8 of it is poured. How many cups are poured? **Answer: _____ cups** **Letter: ____**	**9.** 21 scarecrows are in the contest. 2/3 of them wear hats. How many wear hats? **Answer: _____ scarecrows** **Letter: ____**

3	6	8	12	14	15	18	20	24	30	36
T	L	N	V	S	R	A	E	O	H	D

			☺						

Answer Key (for the teacher)

1. a) A: 5 red, B: 5 red, same number of leaves — but 5/12 is the bigger fraction (5 of 12 is more than 5 of 16), and the strip shows it: 5/16 < 5/12. b) A: 4 yellow, B: 3 yellow, A has more leaves, but 4/16 = 3/12 = 1/4 and the coloured strips are the same length. c) 5/16 < 5/12, 4/16 = 3/12, 8/16 = 6/12 (both 1/2), 10/16 < 9/12 (5/8 < 3/4), 2/16 < 2/12, 12/16 = 9/12 (both 3/4). d) the smaller the fraction.

2. 1. 5 groups of 2, colour 3 groups = 6 tomatoes. 2. 4 groups of 2, colour 3 groups = 6 apples. 3. 3 groups of 4, colour 2 groups = 8 corn cobs. 4. 5 groups of 3, colour 2 groups = 6 pumpkins. 5. 7 groups of 2, colour 5 groups = 10 acorns. 6. 3 groups of 5, colour 2 groups = 10 mushrooms

3. 1. 3/8 of 24 = 9, 1/4 of 24 = 6, together 15, left 9/24 = 3/8 (check: 9/24 + 6/24 = 15/24, left 9/24). 2. 2/5 of 20 = 8, 1/4 of 20 = 5, together 13, left 7/20 (8/20 + 5/20 = 13/20). 3. 1/5 of 30 = 6, 2/3 of 30 = 20, together 26, left 4/30 = 2/15 (6/30 + 20/30 = 26/30).

4. 1. 3 slices → T 2. 30 min → H 3. 20 cobs → E 4. 6 $ → L 5. 20 leaves → E 6. 18 apples → A 7. 12 kids → V 8. 20 cups → E 9. 14 scarecrows → S → THE LEAVES. Decoys: 8, 15, 24, 36.