

Estimation
Video 215 on www.corbettmaths.com

Examples



Workout

Click here

Scan here

Question 1: Work out an estimate to each of the following

- (a) $906 + 397$ (b) $578 + 720$ (c) $912 - 114$ (d) $4998 - 592$
(e) $1965 - 370$ (f) $8.31 + 9.74$ (g) $50.6 - 5.25$ (h) $44.34 + 98.101$

Question 2: Estimate the answers to the following

- (a) 2.1×6.8 (b) 5.7×7.2 (c) 38×22 (d) 41×79
(e) 56.2×11.52 (f) 5.84×32.02 (g) 27×304 (h) 195×92
(i) 3625×2.3 (j) 1.79×8311 (k) $48.55 \times 5.3 \times 7.6$

Question 3: Work out an estimate to each division

- (a) $61.2 \div 10.13$ (b) $59.62 \div 3.93$ (c) $6.87 \div 9.79$ (d) $403.8 \div 21.51$
(e) $900.41 \div 59.75$ (f) $7018.3 \div 5.281$ (g) $\frac{703}{2.04}$ (h) $\frac{9850}{38.6}$ (i) $\frac{314}{2008}$

Question 4: Work out estimates to the following

- (a) $\frac{291 + 602}{102}$ (b) $\frac{8019}{711 - 508}$ (c) $\frac{7.14 + 16.88}{10.96 - 4.85}$
(d) $\frac{132 + 291}{31 - 12}$ (e) $\frac{3890}{9.8 \times 51}$ (f) $\frac{42 \times 194}{10.3 \times 7.8}$

(g) $\frac{18.5 \times 51.9}{4.69 + 20.01}$

(h) $\frac{19.2 \times 41.3}{9.9 \times 5.1}$

Question 5: Estimate the answers to the following

(a) $\frac{3}{10}$ of 68.9

(b) $\frac{7}{20}$ of 83

(c) $\frac{1}{5}$ of 414.7

(d) $\frac{1}{3}$ of 551

(e) $\frac{6}{11}$ of 91

(f) $\frac{2}{15}$ of 103

Question 6: Work out an estimate to each of the following

(a) 8.9^2

(b) 6.02^2

(c) 7.1^2

(d) 11.95^2

(e) 21^2

(f) 49^2

(g) 81.72^2

(h) 597^2

(i) 3.2^3

(j) 1.95^3

(k) 9.88^3

(l) 20.4^3

Question 7: Estimate each of the following.
Give each answer to 1 decimal place.

(a) $\sqrt{30}$

(b) $\sqrt{10}$

(c) $\sqrt{19}$

(d) $\sqrt{44}$

(e) $\sqrt{15.98}$

(f) $\sqrt{140}$

(g) $\sqrt{75}$

(h) $\sqrt{56.74}$

(i) $\sqrt{300}$

(j) $\sqrt[3]{7}$

(k) $\sqrt[3]{30}$

(l) $\sqrt[3]{20}$

(m) $\sqrt[3]{109}$

(n) $\sqrt[3]{149}$

(o) $\sqrt[4]{23}$

Question 8: Work out an estimate to each of the following

(a) 9.9% of 5987

(b) 25.2% of 61

(c) 76% of 197

(d) 14.87% of 80.8

(e) 90.42% of 398.1

(f) 0.49% of 498

Question 9: Find the approximate answer to each of the following multiplications

(a) 40×0.19

(b) 0.497×600

(c) 0.81×5000

(d) 18×0.72

(e) 0.889×303

(f) 209×0.379

(g) 0.052×1984

Question 10: Work out an estimation to each of the following divisions.

- (a) $20.15 \div 0.49$ (b) $69.8 \div 0.204$ (c) $307 \div 0.614$
 (d) $43.4 \div 0.123$ (e) $88.7 \div 0.31$ (f) $709.1 \div 0.533$
 (g) $199.7 \div 0.022$

Question 11: Work out estimations to each of the following.

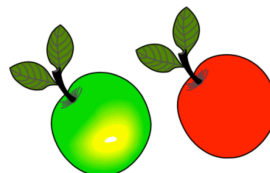
- (a) $\frac{52 \times 6.78}{0.51}$ (b) $\frac{801 \times 10.04}{0.49}$ (c) $\frac{9.8 - 2.9}{0.53}$
 (d) $\frac{58.46}{6.13 \times 0.505}$ (e) $\frac{291 \times 3.95}{0.197}$ (f) $\frac{403 \times 3.91}{0.104}$
 (g) $\frac{7985}{51.28 \times 0.42}$ (h) $\frac{304 \times 9.79}{0.602}$

Question 12: Use approximations to estimate the value of the following

- (a) $6.98 + 3.05 \times 29.09$ (b) $\frac{4.94 \times \sqrt{99.78}}{2.03^2}$ (c) $6.1 + 4.9 \times 3.1 - 9.7$
 (d) $(1.89 + 9.72 \times 0.51)^2$ (e) $\frac{6.12^2}{0.398}$

Apply

Question 1: Suzie buys 53 apples at 38p each.
Estimate the total cost.



Question 2: A rectangular flowerbed has a length of 8.03 metres and a width of 2.93 metres.

- (a) Work out an estimate of the area of the flower bed.
 (b) Work out an estimate of the perimeter of the flower bed.

Estimation

Video 215 on www.corbettmaths.com

- Question 3: A roll of wallpaper cost £7.85.
Richard buys 29 rolls of wallpaper.
Work out an estimate for the total cost.
- Question 4: The scientist Robert Boyle was born in 1627.
Work out an estimate for how many years ago he was born.
- Question 5: Estimate the total cost of 32 printers at £198 each and 58 ink cartridges at £31.15 each.
- Question 6: In a cinema there are 28 rows and in each row there are 22 seats.
Each ticket costs £8.10

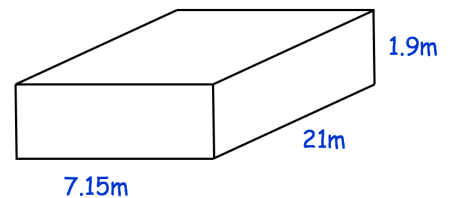
Work out an estimate for the total income from the ticket sales.
- Question 7: Estimate how many books costing \$5.95 can be bought from \$305
- Question 8: Lauren is given two job offers

Job A: £785 a week
Job B: £1950 a month

Which job is offering the greatest pay?
- Question 9: A buzzer beeps every 1,111 seconds.
Work out an estimate for the number of times the buzzer beeps in 1 week.

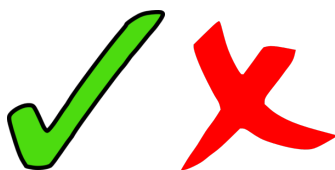
Question 10: Andrew is going to fill an empty swimming pool.

Andrew fills the swimming pool with water at a constant rate of 2.1 litres per second.



Given $1\text{m}^3 = 1000$ litres, estimate how long it takes to fill the pool.

Answers



Click here



Scan here