# Year 8 Decimals – Mixed Practice

ANSWER KEY

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Answers and worked solutions · 30 questions

## A. Mixed practice (mixed order)

**1.** **3.4**

Ignore the decimal points: 85 × 4

Count the decimal places in the question: 2

= 3.4

**2.** **2.5**

Multiply both numbers by 10: 27.5 ÷ 11

= 2.5

**3.** **0.029**

Ignore the decimal points: 29 × 1

Count the decimal places in the question: 3

= 0.029

**4.** **2**

Multiply both numbers by 10: 28 ÷ 14

= 2

**5.** **−6.231**

Ignore the decimal points: 93 × 67

Count the decimal places in the question: 3

= −6.231

**6.** **23**

Multiply both numbers by 10: 138 ÷ 6

= 23

**7.** **21.06**

Ignore the decimal points: 27 × 78

Count the decimal places in the question: 2

= 21.06

**8.** **1/8 < 0.6**

As decimals: 0.125 and 0.6

On a number line, the number further right is greater

**9.** **estimate 36; exact 34.77**

≈ 6 × 6 = 36

Exact: 34.77

The exact answer is close to the estimate

**10.** **2.5 °C**

−4.6 + 7.1

= 2.5 °C

**11. –0.45, 1.55, 1.6**

≤ includes the end value; < does not
Check each value against both ends: –0.45, 1.55, 1.6

**12. 8 tins**

18.9 ÷ 2.5 = 7.56
Round up so there is enough paint: 8 tins

**13. 24**

Multiply both numbers by 10: 264 ÷ 11
= 24

**14. estimate 48; exact 47.04**

≈ 8 × 6 = 48
Exact: 47.04
The exact answer is close to the estimate

**15. –2.5, –6/5, –3/8, 1/8, 5/8**

Write each as a decimal: –6/5 = -1.2, –3/8 = -0.375, 1/8 = 0.125, 5/8 = 0.625, –2.5 = -2.5
Negatives further from 0 are smaller

**16. Yes. 0.5 = 1/2, and dividing by 1/2 is the same as multiplying by 2.**

Test an example
0.5 = 1/2, and dividing by 1/2 is the same as multiplying by 2.
Decide

**17. 0.288**

Ignore the decimal points: 12 × 24
Count the decimal places in the question: 3
= 0.288

**18. 3/10 > –3/8**

As decimals: 0.3 and –0.375
On a number line, the number further right is greater

**19. 0, 1.95**

≤ includes the end value; < does not
Check each value against both ends: 0, 1.95

**20. –0.7 is further below 0 than –0.65, so –0.7 < –0.65.**

Error: for negative numbers the larger digits are further from 0
On a number line, further left is smaller
–0.7 < –0.65

**21. estimate 18; exact 17.92**

≈ 6 × 3 = 18
Exact: 17.92
The exact answer is close to the estimate

**22. There are 2 decimal places in the question, so 0.6 × 0.3 = 0.18.**

Error: only one decimal place was given
6 × 3 = 18
Two decimal places: 0.18

**23. 5.6**

Multiply both numbers by 10: 72.8 ÷ 13
= 5.6

**24. No: 7.8 × 4 ≈ 8 × 4 = 32, so the answer should be about 32 (it is 31.2).**

Estimate: 8 × 4 = 32
3.12 is about 10 times too small
Exact: 31.2

**25. −5/2 < −6/5**

As decimals: −2.5 and −1.2
On a number line, the number further right is greater

**26. −0.4, −0.35, −1/3, 1/8, 0.6**

Write each as a decimal: 1/8 = 0.125, −0.35 = -0.35, −1/3 = -0.333, 0.6 = 0.6, −0.4 = -0.4
Negatives further from 0 are smaller

**27. 15 glasses**

3.75 ÷ 0.25
= 15

**28. 0.2784**

Ignore the decimal points: 32 × 87
Count the decimal places in the question: 4
= 0.2784

**29. −1.25, 0.55**

≤ includes the end value; < does not
Check each value against both ends: −1.25, 0.55

**30. Yes. ≤ means 'less than or equal to', so 3 is included; < means strictly less than.**

Test an example
≤ means 'less than or equal to', so 3 is included; < means strictly less than.
Decide