

Warm Up Grade 8

Date: _____

Quiz tomorrow



1) Use mental math to calculate the following (show work)

a) 25 % of 84 = 21 (1)

b) 30% of 124

(1) 10% of 124 = 12.4 (0.5)

×3 ×3

30% of 124 = 37.2 (0.5)

c) 15% of 60

(1) 10% of 60 = 6 (÷2 ÷2)

(1) 5% of 60 = 3

15% of 60 = 9 (1)

2) Estimate the following (show work...what did you use)

a) 11% of 260

≈ 10% of 260

= 26

b) 68% of 80 ≈56

≈ 70% of 80 = 56 (×1)

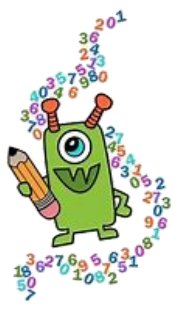
(10% of 80 = 8) ×7

%	Decimal	Fraction
40 %	0.4 or 0.40	2/5 ×20 = 40/100 (×20)
34 % (×100)	0.34	34/100 Reduce = 17/50
19%	0.19	19/100
71%	0.71	71/100

$$\frac{01}{1} = \frac{001}{01} = 01.0 = \%\,01$$

$$01 \neq \%\,01$$

$$001 \quad \text{yo} \quad \%\,01$$



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Quiz tomorrow



1) Use mental math to calculate the following (show work)

a) 25 % of 84 = 21

(thinking) 84 ÷ 4

b) 30% of 124

10% of 124 = 12.4

x3 x3

30% of 124 = 37.2

c) 15% of 60

½ (10% of 60 = 6) ÷2

+ 5% of 60 = 3 ÷2

15% of 60 = 9

2) Estimate the following (show work...what did you use)

a) 11% of 260

↓

≈ 10% of 260 = 26

b) 68% of 80

≈ 70% of 80

10% of 80 = 8

x7 x7

70% of 80 = 56

3)

%	Decimal	Fraction
40%	0.4	$\frac{2}{5} \times \frac{20}{20} = \frac{40}{100} = \frac{4}{10}$
34%	0.34	$\frac{34}{100} = \frac{17}{50}$
19%	0.19	$\frac{19}{100}$
71%	0.71	$\frac{71}{100}$

(% → Decimal: ÷100; Decimal → Fraction: 2÷5)

$10\% = \frac{10}{100} = \frac{1}{10}$

$25\% = \frac{25}{100} = \frac{1}{4}$

$50\% = \frac{50}{100} = \frac{1}{2}$

% of Number

* 10 % of number is like ÷ by 10 (Move decimal 1 place Back)

Ex) 10 % of 70. = 7

→ Can use 10% to get multiples (10%, 20%, 30% ....)

20 % of 90
10% of 9, = 9
×2 ×2

20% of 90 = 18

* 5% Find 10% of # then ÷ by 2 to find 5%

* 25 % of Number is like ÷ by 4
Ex) 25 % of 44 = 11
(like 44 ÷ 4 = 11 your thinking)

→ can use for 25%, 50%, 75%, 100% ...

Ex 75% of 84
25% of 84 = 21
×3 ×3
75% of 84 = 63

* 50% of Number is like ÷ by 2
Ex) 50 % of 20 = 10
(half of 20)
use 50%, 100%, 150%, 200% ....

* 1% of Number is like ÷ by 100 (Move decimal back 2 p
1 % of 123.7 = 1.237
use this for multiples of 1%, 2%, 3%, 4% ...

* 15% → Find 10% of # / Find 5% of # } then add answers for 15%

Grade 8 Percent of a Number day 2 Mentally

Show work to calculate the following:

(a) 10 % of 90 = 9

90
10

(b) 50 % of 42 = 21

42 ÷ 2

60
4

(c) 25% of 60 = 15

10% of 66 = 6.6 x2
20% of 66 = 13.2

(e) 75 % of 24

25% of 24 = 6 x3
75% of 24 = 18 x3

(f) 15% of 80

10% of 80 = 8 ÷2
5% of 80 = 4 ÷2
15% of 80 = 12

(g) 1 % of 38 = 0.38

38
100 = 0.38

= 7.5

75
10 = 7.5

(i) 11% of 120

10% of 120 = 12
1% of 120 = 1.2
1% of 120 =13.2

(j) 30% of 15

10% of 15 = 1.5 x3
30% of 15 = 4.5 x3

(k) 2% of 400 = 4

1% of 400 = 4 x2
2% of 400 = 8 x2

10% of 150 = 15
5% of 150 = = 7.5
15 ÷ 2
7.5

Use estimation to estimate the following

1) 9% of 160

≈ 10% of 160

160÷ 10 = 16

≈16

2) 24% of 80

≈ 25% of 80

80÷ 4 = 20

≈20

3) 51% of 40

≈ 50% of 40

40÷ 2 = 20

≈20

4) 73%

≈ 70% of 63

10% of 63 = 6.3

x 7

70 % of 63 = 44.1

5) 11% of 110

≈ 10% of 110

110÷ 10 = 11

≈ 11

6) 29% of 60

≈ 30% of 60

10% of 60 = 6

x 3 x3

30 % of 60 = 18

7) 42% of 20

≈ 40% of 20

10% of 20 = 2

x 4

40 % of 20 = 8

8) 58%

≈ 60% of 50

10% of 50 = 6

x 6 x4 x6

60 % of 50 = 36

9) 25% of 20

≈ 25% of 20

20÷ 4 = 5

≈5

10) 50% of 300

≈ 50% of 300

300÷ 2 = 150

≈150

11) 50% of 60

≈ 50% of 60

60÷ 2 = 30

≈30

12) 75% of 120

≈ 25% of 120

120÷ 4 = 30

≈75% of 120 = 3 x 30

≈75% of 120 = 90

13) 10% of 440

≈ 10% of 440

440÷ 10 = 44

≈44

14) 20% of 500

≈ 20% of 500

10% of 500 = 50

x 2 x2

20 % of 500 = 100

15) 30% of 180

≈ 30% of 180

10% of 180 = 18

x 3 x3

30 % of 180 = 54

16) 40% of 160

≈ 40% of 160

10% of 160 = 16

x 4 x4

40 % of 160 = 64

* On test & Assessment

17) At the local music concert 300 people attended. 40% of the people were adults and the rest were students.

A) How many adults attended?

B) How many students attended

a) Adults = 40% of Total

= 40% of 300

10 % of 300 = 30

x4 x

40 % of 300 = 120

120 adults attend the concert

b) 300 - 120 = 180

180 students attend the concert

Finding the Percent of a Number With calculator

What does the term "of" mean in math?

"of" tells you to multiply.

To find the percent of a number, you change the percent to a decimal, then multiply.

(÷ by 100)

Examples:
22% of 98
0.22 x 98
21.56

÷100

0.22 x 98 = 21.56

a) 78% of 346
0.78 x 346
269.88

÷100

0.78 x 346

= 269.88

b) 12.5% of 84
0.125 x 84
10.5

÷100

0.125 x 84

= 10.5

c) 6% of 820
0.06 x 820
49.2

÷100

0.06 x 820

= 49.2

d) 146% of 90
1.46 x 90
131.4

÷100

1.46 x 90

131.4

Worksheet Finish Tomorrow also on next 4 pages

Percentage of a Number

Name: _____ Score: _____

Calculate and round off to the nearest hundredth.



27% of 120	32% of 163	
2.1% of 251	16% of 29	76% of 322
8.5% of 145	31% of 199	66% of 188
28% of 52	4.6% of 212	113% of 62
2.99% of 25	27% of 48	8.2% of 45
71% of 76	7.9% of 35	21% of 225
38% of 42	7.1% of 588	51% of 66

0.27 x 120 =

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Name: _____ Date: _____

Percentage of Number Worksheet

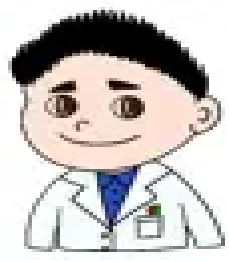
Calculate the percentages.

1 a. 150% of 50	**1 b.** 150% of 90
2 a. 100% of 60	**2 b.** 50% of 100
3 a. 350% of 70	**3 b.** 150% of 70
4 a. 350% of 50	**4 b.** 350% of 90
5 a. 450% of 100	**5 b.** 200% of 30
6 a. 250% of 50	**6 b.** 350% of 40
7 a. 350% of 80	**7 b.** 150% of 100
8 a. 400% of 80	**8 b.** 300% of 50

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Name:_____

Percentage of a Number



Find the percentage of each number.

1. 20% of 60 = _____
2. 30% of 90 = _____
3. 15% of 60 = _____
4. 40% of 30 = _____
5. 24% of 50 = _____
6. 10% of 100 = _____
7. 50% of 50 = _____
8. 10% of 60 = _____
9. 77% of 100 = _____
10. 45% of 60 = _____
11. 35% of 40 = _____
12. 55% of 20 = _____
13. 40% of 90 = _____
14. 30% of 80 = _____
15. 40% of 50 = _____
16. 25% of 20 = _____
17. 20% of 50 = _____
18. 80% of 95 = _____
19. 55% of 40 = _____
20. 12% of 400 = _____

Slambo Resources

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What Percent? - Whole Percents

Name: _____ Score: _____

Calculate the percent numbers.



20 out of 100	15 out of 30	
25 out of 100	25 out of 125	25 out of 250
35 out of 140	15 out of 300	14 out of 280
17 out of 68	20 out of 20	55 out of 220
21 out of 300	25 out of 500	18 out of 36
72 out of 200	99 out of 198	45 out of 225
75 out of 500	60 out of 400	16 out of 200

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