

	Name	Period	Date
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READY

Topic: Completing inequality statements

For each problem, place the appropriate inequality symbol between the two expressions to make the statement true.

If $a > b$, then:

1. $3a > 3b$

2. $b - a < a - b$

3. $a + x > b + x$

If $x > 10$, then:

4. $x^2 < 2x$

5. $\sqrt{x} < x^2$

6. $x^2 < x^3$

If $0 < x < 1$

7. $x > x^2$

8. $\sqrt{x} > x$

9. $x < 3x$

SET

Topic: Classifying functions

Identify the type of function for each problem. Explain how you know.

10. Exponential

x	f(x)
1	3
2	6
3	12
4	24
5	48

Handwritten notes: Differences are constant, common ratio of 2

11. Linear

x	f(x)
1	3
2	6
3	9
4	12
5	15

Handwritten notes: Differences are constant

12. Quadratic

x	f(x)
1	3
2	9
3	18
4	30
5	45

Handwritten notes: and differences are constant

13. Exponential

x	f(x)
1	7
2	9
3	13
4	21
5	37

Handwritten notes: Differences are constant, common ratio of 2

14. Cubic

x	f(x)
1	-26
2	-19
3	0
4	37
5	98

Handwritten notes: and differences are constant

15. Quadratic

x	f(x)
1	-4
2	3
3	18
4	41
5	72

Handwritten notes: and differences are constant

16. Which of the above functions are NOT polynomials? #10, #12

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GO

Topic: Recalling long division and the meaning of a factor

Find the quotient without using a calculator. If you have a remainder, write the remainder as a whole number. Example: $21 \overline{)149}$ remainder 2

$$17. \quad 30 \overline{)510}$$

$$\begin{array}{r} 17 \\ 30 \overline{)510} \\ \underline{210} \\ 210 \\ \underline{210} \\ 0 \end{array}$$

Quotient: 17

$$19. \quad 13 \overline{)8359}$$

$$\begin{array}{r} 643 \\ 13 \overline{)8359} \\ \underline{78} \\ 55 \\ \underline{52} \\ 35 \\ \underline{39} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

Quotient: 643

18. Is 30 a factor of 510? How do you know?

• Yes
• 30 divided evenly into 510

20. Is 13 a factor of 8359? How do you know?

• Yes
• 13 divided evenly into 8359

$$21. \quad 22 \overline{)14857}$$

$$\begin{array}{r} 675 \\ 22 \overline{)14857} \\ \underline{132} \\ 165 \\ \underline{154} \\ 117 \\ \underline{110} \\ 7 \end{array}$$

Quotient: 675
with a remainder of 7

$$23. \quad 952 \overline{)40936}$$

$$\begin{array}{r} 43 \\ 952 \overline{)40936} \\ \underline{3808} \\ 2856 \\ \underline{2856} \\ 0 \end{array}$$

Quotient: 43

22. Is 22 a factor of 14587? How do you know?

• No - There was a remainder when 14587 was divided by 22

24. Is 952 a factor of 40936? How do you know?

• Yes
• 952 divided evenly into 40936

$$25. \quad 92 \overline{)3405}$$

$$\begin{array}{r} 37 \\ 92 \overline{)3405} \\ \underline{276} \\ 645 \\ \underline{644} \\ 1 \end{array}$$

Quotient: 37
with a remainder of 1

$$27. \quad 27 \overline{)3564}$$

$$\begin{array}{r} 132 \\ 27 \overline{)3564} \\ \underline{27} \\ 84 \\ \underline{81} \\ 34 \\ \underline{324} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

Quotient: 132

26. Is 92 a factor of 3405?

• No - There was a remainder when 3405 was divided by 92

28. Is 27 a factor of 3564?

• Yes
• 27 divided evenly into 3564

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